

MACHINERY

ATALOGUE

SUPPLIES §



A. R. WILLIAMS,

MANUFACTURER AND DEALER IN

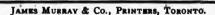
Machinery and Mill Supplies

RY DESCRIPTION.

SOHO MACHINE WORKS.

Esplanade, near Union Station,

TORONTO, ONT.



PLEASE NOTE.



In writing me be particular to give your post-office address, and write your name plainly.

To save unnecessary correspondence please give as full particulars as possible of the machinery you require.

In ordering be particular to give all measurements so that I can fully understand what you desire me to send you, and full plain shipping directions.

All claims for errors must be made on receipt of goods.

Discount Sheets furnished on application.

Prices are subject to change without notice.

All orders for machinery to be taken upon, or subject to the conditions, of my usual lien order forms.

All quotations for machinery are on a Cash Basis; and for Supplies, monthly settlements. If under \$30 per month, net cash. If over \$30 per month, three months, or 3 per cent. off for prompt cash.

1 1 F

/INTRODUCTORY.

N presenting this catalogue to the Trade and users of machinery, I desire to thank my customers for the patronage bestowed upon me. and to assure them that I will endeavor, by prompt and careful attention to their needs, by sending them the very best goods, and by giving early and full replies to their inquiries for information, to merit a continuance of their trade.

I intend this catalogue to be, as per the title page, a

"Price List of Machinery,"

AND A

"Price List and Illustrated Catalogue of

MACHINERY SUPPLIES."

I will furnish full particulars of any of the machines herein on application.

This catalogue only covers prices for new machinery and goods. I always have in stock a large supply of second-hand machinery and goods, which, when refitted and put in first-class order, I can sell at quite a discount from prices of new machinery. I will send list of second-hand machinery on application.

A. R. WILLIAMS,

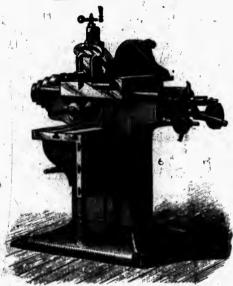
SOHO MACHINE WORKS,

Sept. 1, 1887.

Toronto, Ont.

PRICE LIST

Iron Working Machinery.



Shaping Machines.

10 x 18 Pedestal, with Automatic Cross and Circular Feeds, \$375.00.

16 x 20 Gould & Eberhart Pattern, with Automatic Cross and Down Feeds, \$375.00.

10 x 18 PEDESTAL SHAPER.

Iron Planers.

| PRICE. |
|-------------------------|
| PRIOR. |
| \$400 |
| 525 555 |
| 650 900 |
| 950 1,075 |
| 1,075 1,500 1,900 |
| |

Engine Lathes.

(Send for Circulars giving all details.)

| PER PT. OF BED. | \$12 12 00 | 12 00 | 11 12 00 | 12 00 | 15 00 15 00 | | | 88 88 88 | | | |
|--------------------------|-----------------------|---------------|------------------|---------------|---|---------------------------------|--------------------------------|--|---|------------|------------|
| PRICE | \$270 00 285 00 | .320 00 | 240 00 300 00 | 330 00 | 375 00 385 00 | | - | 250 250 250 250 250 250 250 250 250 250 | - | - | - |
| FACE OF CONE. | 4 steps 2 | 2 " 2 | 4.4 ;; | 4 " 23. | *** | | 3 | 4 4 3 3 8 8 | 4 | 4 4 | * |
| STYLE OF FEED. | Rod and Screw | Rod, Screwand | Screw | Rod, Screwand | Rod and Screw | Rod and Screw Cross Feed and | Hol'w Spindle Rod and Screw | :: | :: | : 3 | : |
| STYLE OF TOOL REST. | Gibbed. Elevating. | Compound. { | Gibbed. | ; | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | Gibbed. | ے • | To emit | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | , | Compound. |
| SWING OVER CAR'GE. | 74 in. | ; 9 | ; ; | ; 7 æ | , , , | | ,, 01 | 3 2 2 | | 27. | ; |
| LENGTH WILL TURN. | 3 ft. 5 in. | 3 , 2 , 3 | | 3 0 % 8 | 3 3 | | 4 " 5 " | 46 | | 9 20 | ., 0 ,, 01 |
| LENGTH OF BED. | 6 ft. 6 ** | ; 9 | 99 | 9 | 3 | ; 5 5 | .00 | . : | : | | ., 91 |
| SWING OVER SHEARS. | 15 in. | 15 " | | 16 " | | 3 87 | : | 222 | . 8 | : : ::: | * |
| No. | -8 | • | 410 | . 9 | -0 | | 9 | 75 | 12 | 42 | 19 |

Engine Gap Lathes.

| SWING OVER SHEARS. | SWING IN GAP. | LENGTH OF BED. | PRICE. | FOOT OF BED. |
|-----------------------|---------------|-------------------|----------|--------------|
| 22 in. | 36 in. | 10 ft. | \$475 00 | \$15 00 |
| 26 " | 42_'' | 10 " | 550 00 | 20 00 |
| 26 in. | 42 " | 20 " 8 in. | 700 00 | 20 00 |
| 30 '' | 50 '' | 12 " | 700 00 | 25 00 |

Turret Lathes.

| 14 in. Swing Plain Turret | \$400 00 |
|--|----------|
| 16 " " " | 450 00 |
| 16 " Swing with Back Gear and Power Feed | 525 00 |
| 16 "Swing with Back Gear, Power Feed, Wire Feed and Chuck Motion in the Head | |
| Milling Machines. | |

| No. 1 Plain Milling Machine (Brainerd Pattern) | \$350 00 |
|--|----------|
| No. 1 Back Geared Milling Machine (Brainerd Pattern) | 400 00 |
| No. 2 Plain Milling Machine (Brainerd Pattern) | 450 00 |
| No. 2 Back Geared Milling Machine (Brainerd Pattern) | 55C 00 |

All the above have vises.

Drilling Machines.

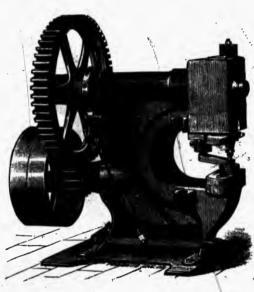
(Send for Circular.)

| o. | DRILL TO CENTRE. | PRICE PLAIN. | PRICE WITH BACK GEAR. | STYLE C | of Ferd. |
|----|------------------|-----------------|--------------------------|---------|----------|
| 1 | 16 in. | \$125 00 | | Hand & | power. |
| 3 | 20 " | 175 00 | \$225 00 | • 6 | - " |
| 3 | 26 " | | 275 00 | " | " |
| | 32 '' | | 350 00 | • 6 | " |
| 5 | 40 " | | 400 00 | 66 | 66 |
| 3 | 18 " | | 500 00 | ** | 44 |

| Suspension Drill, plain | \$140 00 |
|-------------------------|----------|
| " hack geared | 190 00 |
| Radial Drilling Machine | 1,200 00 |
| | |

See page 9 for particulars of Blacksmiths' Drills.

Sundry Iron-Working Machinery.

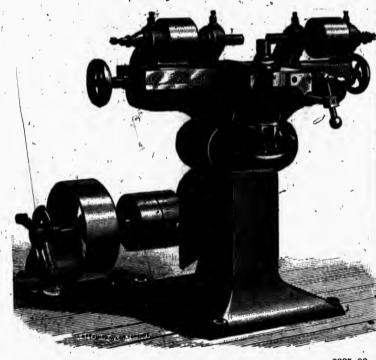


I will mail, on application, circulars giving full description of any of the following machines. Where I have no circulars I can generally send photos and a letter-press description.

| r: | 1 | |
|---|---------|----|
| Punch and Shears, 6 in. gap, "Single" | . \$200 | 00 |
| " " 12 " " " | . 320 | 00 |
| 24 | | |
| " " 12 " " Double" | . 500 | |
| " " 24 " " " " | 725 | |
| Bradley Hammer, 40 lb. | 400 | |
| | | |
| Drop .Hammer, 500 "Moline Pattern | | |
| " 800 " P. and W. " | . 800 | 00 |
| Drop Press, No. 19, Bliss " | . 225 | 00 |
| Drop Press, No. 19, Bliss "" | 350 | |
| Bolt Cutter, Stationary Die, Cuts from \$ to 11 inches, wit | | 00 |
| Taps, Dies and Collets | | 00 |
| Bolt Cutter A. and P. revolving head, Cuts from \$ to 11 inches | 8 380 | |
| "Schlencker ." " " " | 425 | |
| | | |
| Seaton Bolt Headers, No. 1 Machine | . 800 | 00 |
| " " " " " " " " " " " " " " " " " " " | . 1,000 | 00 |
| | | 00 |
| Forge Furnace, 26x34 inside, lined with fire brick | . 75 | |
| Key Seat Slotters, g, 1 and g-inch cutters | 125 | |
| II. | 1 100 | 20 |
| Heavy Slotting Machine | 1,100 | 00 |
| Index Centres for Milling Machine | . 140 | 00 |
| | 1/ 1 | |

Brass Workers' Machinery.

(Send for Circulars.)



| 2-Spindle Valve Milling Machine | \$325 | 00 |
|--|--------------|-----|
| Fox Lathe, complete. | 360 | 00 |
| Fox Monitor Lathe, complete | 450 | 00 |
| Cock Grinding Lathe, " | 140 | 0Ô |
| Plain Lathe, with set over tail stock | 200 | 00 |
| 8-in. Bench Lathe and C shaft | 75 | |
| 12 " Plain " " (on légs) | 110 | |
| 14 " " " " " " " " " " " " " " " " " " " | 135 | |
| | 35 | |
| 12 and 14-in. Lathes, with compound tool rest, extra | 60 | |
| Globe Valve Chuck, to 1 inch | | |
| · · · · · · · · · · · · · · · · · · · | 70 | yv. |

(For Brass Monitors see Turret Lathes.)

Barnes' Foot-Power Machinery.

Iron Tools.

(Send for Special Calalogue.)

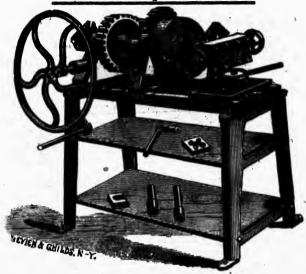
| | , | | | 24, |
|-----|--|-----|-----|-----|
| No. | 4. Lathe, complete, for foot power. | 846 | 00 | |
| | 41. "." " " " " | 80. | 50 | |
| | 5 11 11 11 11 11 11 11 11 11 11 11 11 | 115 | 00 | |
| | 6. " " " " | 167 | 50 | \ |
| ' | 6. " with C shaft, for power | | | |
| | 7. " 15 x 7, complete, with C shaft, for power | | | |
| | 1. (20 in.) Drilling Machine, round base. | | | |
| | 1. (20 in.) " " square base | | | |
| | 2. (25 in.) " back geared, square base | | | |
| | 2. (40 III.) Dack gented, square base | 220 | w | |
| | | | | |
| | Wood Tools. | | | |
| | A STATE OF THE STA | | | |
| No | 1. Amateur Scroll Saw | | === | |
| | 2. Velocipede "with Boring Attachment | 24 | | |
| | | 28 | | |
| | | 15 | 00 | |
| | 7. Large Size " | 18 | 00 | |
| Fo | ot Power Former | 24 | 00 | |
| Cir | cular Rip Sawing Machine | 60 | 00 | |
| | mbined Circular and Scroll Saw and Boring Attachment, in- | | | |
| | cluding 2 Circular Saws, 12 assorted Scroll Saws, the Boring | | | |
| | Attachment, with an "Old, Reliable" Self centring Drill- | | | |
| | Chuck, all combined in one machine | | 00 | |
| Co | mbined Circular and Scroll Saw, including 2 Circular Saws | 0 | •• | |
| .,0 | and 12 assorted Scroll Saws | 48 | 00 | |
| Civ | cular Saw alone, including 2 Circular Saws, 1 Rip and 1 | 10 | - | |
| OII | Cross-out | 49 | 00 | |
| | | | | |

When either the Circular Saw, Scroll Saw or Boring Machine has been ordered separate, the other parts can be furnished, if the number of the machine is given, at the following prices:

Scroll Saw alone, including 12 assorted Scroll Saws.

| Circular Saw Attachment, Mandrel and Boxes, with 2 6-inch Circular Saws, 1 Rip and 1 Cross-cyt | \$15 00 |
|--|----------------|
| Scroll-Saw Attachment, including 12 assorted Scroll Saws Boring Attachment, including an "Old Reliable" Self-centring | 9,00 |
| Drill-Chuck. Counter Shaft for steam power. | 14 00 14 00 |

I. X. L. Pipe Machine.



This machine is simple in construction, easy to work, not liable to get out of order, and requires no skilled labor. The arrangement of the gearing permits of the machine being adjusted to the work to be done, enabling one man to screw two-inch pipe with ease.

CROOKED THREADS CANNOT BE CUT,

as the pipe revolves, and the die stands still. There are no loose guides to be changed or lost. The machine can be easily arranged to operate by belt power when desirable.

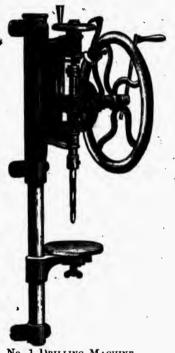
It is also an excellent machine for machine and jobbing shops, for cutting off round iron and steel, and with the Bolt-Threading and Nut-Tapping Attachment it makes a very good Bolt-Threader and Nut-Tapper.

HAND MACHINE,

POWER AND HAND MACHINE,

Speed of Countershaft, 200 revolutions per minute; Pulleys 11 inches in diameter.

Blacksmiths' Machinery.



| _ | |
|----------|---|
| o. 1. | Hand Drilling Ma- |
| 2. | chine\$23 00 Hand Drilling Ma- |
| 3. | chine |
| 0. | chine, double geared 35 00 Bolt Clipper, cuts to |
| 1. | three-eighths 4 00 Bolt Clipper, cuts to |
| 2. | seven-sixteenths 5 00 |
| 3. | one-half 7 00 |
| 1. | Clipper, cuts to ve-eighths 9 00 Bolt - Threading and |
| | Nut-Tapping Ma- chine; Taps, Dies |
| | and Collets, ½ to ½ inch |
| 2. | Bolt - Threading and Nut-Tapping Ma- |
| | and Collets, ½ to 1 |
| | inch |
| 2. 3. | " 30 00 |
| | Tire Upsetter, to 2 in. wide. Weight 100 lbs 14 00 |
| 2. | 100 lbs 14 00 Tire Upsetter, to 4 in. wide. Weight |
| | 150 lbs |

No. 1 DRILLING MACHINE.

| | Bellows. |
|----------|----------|
| DOMINION | |

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|----|------|--|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|----|--|---|----|---|---|---|-----|----|---|------|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|----|---|----|---|---|
| 24 | inch | | | | | | | | | | | | | | | | | | | | 8 | 1 | 5 | 0 | 0 | 1 | 24 | | inch | | | | | | | | | | | | | | | | | | | | |
| 26 | 3 " | | | | | | | | | | | | | | | | | | | | | 16 | 6 | 0 | Ю | - 1 | 26 | ì | | | | | | | | | | | | | | | | | | | | | |
| 28 | 3 66 | | | | | | | | | | | | | | | | | | | | | 17 | 7 | 0 | 0 | - 1 | 28 | 3 | " | | | | | | | | | | | | | | | | 14 | 4 | α |) | |
| 30 | | | | | | | | | | | | | | | | | | | | | | | | 0 | | | 30 |) | 64 | | | | | | | | | | | | | | | | 1 | 5 | 0 | 0 | |
| 32 | | | | | | | | | | | | | | | | | | | | | | | | Õ | | | 32 | 2 | 66 | | | | | | | | | | | | | | | | 1 | В | 00 | 0 | |
| 34 | | | | | | | | | | | | | | | | | | | | | | | | 0 | | | 34 | ı | 66 | | | | | | | | | | | | | | | | 1 | 7 | 0 | 0 | |
| 36 | | | | | | | | | | | | | | | | | | | | | | | | 0 | | | 36 | 3 | 66 | - | | | | | | | | | | | | | | | 1 | 8 | 00 | 0 | |
| 38 | | | | | | | | | | | | | | | | | | | | | | | | Ö | | | 38 | 3 | | | | | | | | | | | | | | | | | 2 | | | | |
| 40 | " | | | | | | | | | | | | | | | | | | | | | | | 0 | | | 40 |) | | | | | | | | | | | | | | | | | 2 | | | | _ |

 Coopers' Testing Bellows
 \$5.00.

 Moulders' Bellows
 \$18.00 per doz.

 Portable Forge
 No. 1, \$22.00; No. 2, \$32.00; No. 3, \$42.00.

Wood Working Machinery.

I can furnish circulars with wood cuts or photos of any of the machines enumerated herein by return mail. These machines are manufactured to order specially for my trade. LIGHTNING PLANING AND MATCHING MACHINE, S. A. Woods' No. 2½ double surfacer, six pairs of 8½-in. feed rollers; weight, 6,500 lbs.; 14 in. wide, 4 in. thick....\$1,400 00 No. 1. PLANER AND MATCHER, three pair 8-in. feed rolls, 24 in. wide, 5 in. thick..... 800 00 With Double Cylinder and Beading Attachment..... 1,100 00 No. 2. Three pair 7-in. feed rolls, 24 in. wide, 5 in. thick..... 700 00 No. 3. Two pair 6-in. feed rolls, 24 in. wide, 5 in. thick, with improved cone feed..... 580 00 Side Gear and Index for do., extra..... 25 00 Beading Attachment..... 50 00 No. 4. Two pair 5-in. feed rolls, 24 in. wide, 4 in. thick...... 450 00 Beading Attachment..... 50 00 No. 5, PLANING, MATCHING AND MOULDING MA-CHINE, single surface, 24 in. wide, 5 in. thick, two pairs 5-in. feed rollers, slotted cylinder heads and Shimer matcher heads..... 450 00 Do., double surfacer, three sets feed rollers..... 550 00 Do., single surfacer, pony machine, 24 in. x 5 in...... 325 00 400 00 Do., double ECLIPSE PONY PLANER, MATCHER AND MOULDER, 24 in. wide, 6 in. thick, slotted cylinder heads, Shimer matcher heads..... 325 00 Whitney Planer, 24 in. wide..... 400 00 425 00 30 500 00 Counter Shaft for do 35 00 Diagonal Door Planer and Polisher..... 700 00 No. 1. Double Surface Revolving Bed Planer, improved delivery rolls in front of under cylinder, planes 26 in. wide, 10 in. thick, with counter shaft, self-contained 725 00 No. 2. Revolving Bed Planer, patented, geared on both sides, planes 26 in. wide and from 1-16 to 10 in. thick..... 375 00 Counter Shaft and Pulleys for do..... 35 00 No. 3. Revolving Bed Planer, patented, double geared, planes 24 in. wide and from 1-16 to 10 in. thick 285 00

Counter Shaft and Pulleys for do.....

35 00

Wood Working Machinery—Continued.

| New and Improved Surface Planer, planes 24 in. wide and 8 in. thick, top and bottom rollers driven by gear, complete, | |
|---|---------------|
| with counter shaft | \$165 00 |
| Do., 20 in. wide, 8 in. thick | |
| BUZZ PLANERS, with counter shaft and either straight or | |
| diagonal knife | 145 00 |
| No. 1. 12 in. wide | 75 00 |
| " 2. 16 ": | 100.00 |
| " 3. 20 " | 125 00 |
| " 4. 24 " | 150 00 |
| No. 1. Patent Revolving Bed Moulding Machine. planes 12 in. | |
| wide, matches 10 in., table drops 12, to work four sides | 650 00 |
| No. 1. Do., to work three sides | 550 00 |
| No. 2. Patent Revolving Bed Moulding Machine, planes 10 in. | |
| wide, matches 10 in., table drops 12 in. to work four sides. | 550 00 |
| No. 2. Do., to work three sides | 450 00 |
| No. 3. Moulding Machine, ordinary style, planes 8 in., table | |
| drops 12 in. to work four sides | 400 00 |
| No. 3. Moulding Machine, ordinary style, to work three sides | 350 00 |
| No. 4. Moulding Machine, to work three sides, planes 7½ in. wide, drops 14 in., ordinary style | 250 00 |
| No. 4. Do., one side | 200 00 |
| No. 5. Do., for sash, one side, planes 5 in table drops 14 in | 175 00 |
| No. 6. Do., wood frame | 125 00 |
| WOOD LATHES, 18-in. swing, with all parts, which includes head and tail stock, counter shaft, two rest sockets, one | |
| double and two single T rests, bell chuck and face plate | 45 00 |
| Do., 24-in. swing, with all parts | 60 00 |
| having a first-class, simple and easily-regulated top tension | 75 00 |
| BAND SAW, the "New Era," with 30-in. wheels, and all latest improvements, made to bolt to a post, warranted | 100 00 |
| Do., 34-in. wheels, heavy iron frame with all improvements | 175 00 |
| SAW TABLE, iron frame rip saw table, with adjustable man- | |
| drel, adjustable fence and counter shaft, with wood top | 90 00 |
| Do., iron top | 115 00 |
| CUT-OFF FENCE AND BORING ATTACHMENT, for either of the above | 10 00 |
| COMBINED SAW TABLE, rip and and cross cut, Carey & | 10 00 |
| Harris' pattern, with rip and cut-off fences and counter | |
| shaft, complete | 150 00 |



Wood Working Machinery—Continued. CUT-OFF SAW TABLE, iron frame, with counter shaft attached **\$125 00** SAND PAPERING MACHINE, ordinary door elbow sander 45 00 SAND PAPERING OR POLISHING MACHINE, 24-in. machine with two drums and eight geared feed rolls..... 400 00 475 00 PERFECTION WOOD POLISHER, full combination, with cutter head, sand cylinder and sand pad, 24-in., \$700.00; 30-in., \$800.00; 40-in., \$900 00..... Do., treble sander, with two sand cylinders and sand pad. 24-in., \$650.00; 30-in., \$750.00; 40-in., \$850 00....... Do., double sander, with one sand cylinder and sand pad, 24-in., \$575.00; 30-in., \$625.00; 40-in 700 00 BLIND MACHINERY .- Ellis' Blind Slat Tenoning Machine 70 00 Do., Improved Blind Slat Tenoning Machine 75 00 Do., New and Improved Blind Stile Boring and Morticing Machine.... 130 00 Do., Blind Slat Wiring Machine, foot...... 25 00 66 44 hand..... 15 00 Mitreing Machine, foot..... 25 00 hand..... 14 00 GAUGE LATHES.—No. 1. Bailey broom handle lathe..... 130 00 Do., No. 2. Bailey broom handle lathe, turns to 4 ft. 6 in. long 200 00 66" 6. " "7 "6 " 230 00 Do., No. 3. Do., No. 1. Waymouth lathe, works stock up to 2 in 225 00 250 00 21 in Do., No. 2. " " Do.; No. 3. 3 in 275 00 PERFECTION GAUGE LATHES.—No. 1. broom handle 130 00 Do., No. 2. Turns to 3 ft. 8 in. long...... 160 00 4 " 8 " Do., No. 3. 210 00 Do., No. 4. 7. " 8 " 240 00 SPOKE LATHE, for turning irregular forms, such as handles for axes, picks, hammers, spokes, etc......... 235 00 IMPROVED SCOURING MACHINE, with belt...... 40 00 AUTOMATIC HANDLE SAWING MACHINE, for sawing square sticks or handles up to 8 ft. long..... 650 00 CARVING MACHINE, Buss' improved carver..... 95 00 DOVE-TAILING MACHINE, Boult's pattern..... 325 00

Wood Working Machinery—Continued.

| TENONING MACHINE, with double copes and 5½ in. heads, iron frame machine, complete | \$160 00 |
|--|-----------------|
| Do., with single cope | 150 00 |
| Do., without copes | 135 00 |
| Do., heavy machine with double copes and 8-in. heads | 240 00 |
| SHAPING MACHINE, No. 1. Iron frame with wood top, | |
| three sets of collars and guide | 100 00 |
| Do., No. 1. Same as above with iron top | 115 00 |
| Do., Pedestal frame machine with all parts and iron top | 135 00 |
| No. 1. Morticing Machine, foot | 16 00 |
| No. 2. " " " Improved " power | 18 00 |
| Improved " power | 140 00 |
| " " with Boring Attachment | 160 00 |
| Improved Horizontal Boring Machine, with one spindle | 90 00 |
| " two spindles, ad- | |
| justable | 125 00 |
| Post Boring Machine, driven by gears | 25, 00 |
| " " belt | 30 00 |
| Stroke Jointer, 4-ft. stroke | 250 00 |
| " " 5 " | 275 00 |
| . " 6 " , | 325 00 |
| " " 7 " | 390 00 |
| RELISHING MACHINE, combined, for both sash and doors | 500 00 |
| DOOR CLAMP, Abercrombie's patent, wood frame, iron | |
| mounted | 75 00 |
| SASH CLAMP, Abercrombie's patent, wood frame, iron | FO 00' |
| mounted | 50 00 |
| RIM AND SPOKE ROUNDER, iron frame, with two heads | 60.00 |
| RE-TENONING MACHINE, iron frame, Pettingell pattern | .75 00 |
| HUB MORTISING MACHINE, iron frame | 350 00 |
| RIM BORING MACHINE, " " | 150 00 |
| BOSS SPOKE LATHE, " " | 300 00 |
| Separators. | |
| . I. C. AGITATOR, No. 1-36-in. cylinder, 48-in. separator, | |
| for steam, end shake | \$420 00 |
| end shake | 375 00 |
| end shake | |
| 48-in separator | 425 00 |
| Io. 2.—Do., 32-in. cylinder and 48-in. separator | 410 00 |
| o. 3.—Do., 32 " " 44 " | 390 00 |
| 20.20 | |

Saw Mill Machinery.

Lane's Lever-Set Circular Saw-Mills.

WITHOUT SAWS.

(See Saw List for Prices of Saws.)

| | | | | | | | No. 1. | No. 2. |
|-------|--------|------|----------|--------|----|------|----------|----------|
| Iron. | Frame. | with | Carriage | to cut | 20 | feet | \$355 00 | \$425 00 |
| " | " | 44 | " | | 25 | " | 385 00 | 460 00 |
| " | " | 44 | 44 | " | 30 | " | 430 00 | 510 00 |
| 44 | 4.6 | " | 4.6 | 66 | 35 | 44 | 460 00 | 545 00 |
| 66 | 44 | " | | " | 40 | " | 520 00 | 635 00 |
| " | 4.6 | 4.6 | - " | ٠., | 45 | " | 580 00 | 700 00 |
| 66 | 66 | : 6 | , " | " | 50 | " | 620 00 | 760 00 |
| 66 | 66 | 44 | - 66 | " | | 44 | 670 00 | 800 00 |

Above prices include Fairbank's Gauge Roll, Frost Dogs, Upright Indicator, Lane-Pattee Foot Rig.

"Eclipse" Saw Mill.

This is a heavy iron-frame mill with heavy steel mandrel, patent curved teeth (Thompson dogs), paper friction feed and gig back, taper attachment for sawing taper timber, receding movement which operates head blocks either at rest or in motion, with carriage wooded, rope feed. A first-class, heavy, substantial iron-frame saw mill, capable of cutting from 15,000 to 50,000 feet lumber per day, according to the material and power used.

| Two-b | lock | mill, | complete | with | 60-in. | saw | \$700 | 00 |
|-------|------|-------|----------|------|--------|-----|-----------|----|
| Three | " | " | " | " | 66 | | 825 | 00 |
| Four | " | 66 | 66 | 6 % | 66 | 66 | 950 | 00 |

The Esplin Band Mill.

This mill has been pronounced by competent mill men to be the best band mill in the market. I can furnish for prompt delivery. Send for circulars and quotations.

Saw Mill Machinery-Continued.

(Send for Circulars, and in writing give Particulars of Requirements.)

| Saw Mill Dogs (D. W. Thompson's Patent) per pair | \$ 75. | 00 |
|--|--------|---------------|
| No. 1 Canter (Iron Work) | 100 | 00 |
| " 2 " " | 125 | 00 |
| " 3 " ", | 150 | 00 |
| SINGLE EDGER, Iron Work, complete, including mandrel, | | |
| 18-in. saw, counter shaft, wheels, shafts, boxes and | | |
| track | 55 | 00 |
| DOUBLE EDGER, Iron Frame, two 16-in. saws, one with | / | |
| lever to move and one stationary with dials and pointer | 4300 | 00 |
| DOUBLE EDGER, Iron Frame, with three 18-in. saws, two. | | |
| movable | 350 | 00 |
| GANG EDGER, Iron Frame, complete, with five 18-in. saws, | 9 | |
| a heavy first-class machine | 500 | 00 |
| No. 1. BULL WHEEL, Iron Work, 100 ft. 7-16 chain, | ** | |
| with friction feed, lever and eccentric box, and barrel | \ | \ |
| for chain | 85 | 00 |
| No. 2. BULL WHEEL, Iron Work, heavier, 100 ft. ½-in. | , | |
| chain, with friction feed, lever and eccentric box, and | | |
| barrel for chain | 100 | 00 . ′ |
| No. 1. TWO-SAW TRIMMER; complete machine, heavy | | |
| wood frame, iron mounted, with two 18-in. saws | 125 | 00 |
| GANG TRIMMER, to cut 10 to 18 feet, six saws | 450 | 00 |
| SLAB SAW RIG | 75 | 00 |
| No. 1. SWING SAW, Iron Work, 18 in. saw | 30 | 00 |
| " 2. " 24 " " | 42 | 00 |
| \" 3. " 28 " " | 50 | 00 |
| SLASH TABLE with Ewart chain and six saws. (Send par | ticula | rs |
| for prices.) | | |
| PONY SAW MILL, with heavy wood frame, iron mounted, | | |
| paper friction feed and gig back, and having head blocks | | |
| wooded, with all necessary rack and track, capable of carry- | | |
| ing up to a 60-in. saw, and cutting from 6,000 to 15,000 | | |
| per day, according to the power used. With two head blocks | | |
| | 350 | 00 |
| Same as above, with three head blocks and 48-in. saw | 400 | 00 |
| Extra size of saw at extra price. | | |

Shingle Mill Machinery.

(Send for Circulars.)

| "Boss" Shingle Machine with Saw | \$300 00 |
|---|----------|
| " Drag Sawing Machine with Saw | 125 00 |
| " Shingle Block Bolter, 44 Saw | 125 00 |
| " Shingle Jointer, 38-5 Knife | 50 00 |
| " Packer (all iron frame) | 25 00 |
| Drag Saw Iron Work and Saw | 95 00 |
| 36-in. 4-knife Jointer (all iron frame) | 35 00 |
| 42-in. 6-knife " " " | 50 00 |
| Upright Swing Shingle Machine, with Saw | 150 00 |

Lath Machinery.

| "Boss" Lath Bolter | \$110 00 |
|---------------------------|----------|
| " " Machine | 125 00 |
| Lath Equalizer | 55 00 |
| Lath Varn at Market Price | |

Veneer Machinery.

I control the patterns, and manufacture to order heavy, substantial Veneer machines, suitable for cutting cheese-box material and veneer from $\frac{1}{3\cdot 2}$ to $\frac{3}{8}$ of an inch thick. Can arrange the capacity of the machine to suit the work required, cutting from 3 ft. to 6 ft. long. The machine is built on a heavy oak timber frame, solidly tenoned and bolted together. Iron work fitted on, complete, and making one of the most substantial Veneer machines manufactured on the continent. I have quite a number in use, and can furnish good references as to the ability of the machine.

DIMENSIONS AND PRICE LIST.

Horizontal Stationary Tubular Steam Boilers.

(Made of Dalzell Steel.)

| Horse Power | 10 | 15 | 8 | 33, | 32 | 40 | 3 2, | 8 | 02 | 28 |
|----------------------|-------|-------|-------|-------|-------|-------|----------------|-------|--------|--------|
| Diameterin. | 8 | * | 36 | # | 48 | 48 | ¥ | .8 | 09 | 99 |
| 3-in. Tubes | 8 | 22 | 30 | 40 | 22 | 52 | 1 9 | 92 | 92 | 100 |
| Length of Tubes. ft. | ∞ | 6 | 10 | 10 | 11 | 12 | 12 | 12 | 14 | 14 |
| Shipping Weight | 4200 | 4800 | 0099 | 0008 | 9700 | 10500 | 12500 | 15500 | 16500 | 19700 |
| Price with Fixtures | \$250 | \$300 | \$350 | \$450 | \$575 | 8000 | 9800 | 006\$ | \$1000 | \$1200 |

FIXTURES.—Cast Iron Front; Grate Bars (coal or wood); Safety Valve; Steam Gauge, Gauge Cocks; Glass Water Gauge; Blow-off Cock; Ash Pit Door and Frame.

SMOKE STACKS.

| 12 13 1 | 77 | 26 28 | 8 | \$ |
|----------------|------------|-------|--------|--------|
| | 19 | 23 26 | 53 | 40 |
| Price per fnot | \$1 25 \$1 | 81 75 | \$ 500 | \$2 50 |

Portable Boilers on Skids.

| Number of Size | 0 | - | 67 | က | 41 | 20 | 9 | 7 | 00 |
|---|----------------|-----------------|----------|------------|--|---|--|--|--|
| Horse Power, as usually rated | 9 | ∞ | 10 | 12 | 15 | 82 | 153 | 88 | 33. |
| Diameter of Boiler Length of Furnace Width of Furnace Height of Furnace Number of Tubes Liameter of Tubes Length of Tubes Diameter of Stack Length of Stack Length of Solier over all | 82227 c 8338 c | 888888 82481 | 88488284 | 1888888888 | 24888 85 15 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 34 88 88 88 88 88 88 88 88 88 88 88 88 88 | 852 64 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | 662 25 25 25 25 25 25 25 25 25 25 25 25 25 | 668 22 22 25 25 25 25 25 25 25 25 25 25 25 |
| Weight of Boiler and Britchen, about. | 2350 | 2950 450 | 3200 | 3550 | 3800 | 4600 1050 | 5450 1150 | 6300 | 7200 1500 |
| Weight of Boiler and Fixtures complete, about | 2800 | 3400 | 3700 | 4150 | 4600 | 5650 | 0099 | 7800 | 8700 |
| Price complete | \$390 | \$480 | \$530 | \$580 | \$640 | \$700 | 8800 | 006\$ | \$1000 |

Fixtures comprise Grates, Steam Gauge, Water Gauge fitted with Stand Pipe, Gauge Cocks, Safety Valve, w-off Valve. Wheels and Axles extra. Blow-off Valve.

FINISHED IN FIRST-CLASS STYLE THROUGHOUT. (Send for Engine Catalogue.)

These Slide Valve Stationary Engines I have built, specially to order, for my trade, with square, heavy, substantial frame.

DIMENSION'S AND PRICES.

| Sta | tioi | nar | ·y | En | gu | ies. | | • |
|-------------|----------------------------|------------------|-----------------------|-----------------------------|------------------------|---------------|---|-----------------------|
| 8 | 21, | 8 | 8 | 132 | 72 | 8 | \$1300 | 180 |
| 19 | 16 | 24 | 8 | 120 | 7.73 | 18 | \$1100 | 170 |
| 3 | 15 | 24 | 100 | 120 | 73 | 16 | 8900 | 160 |
| 22 | 17 | જ | 110 | 110 | 8 | 16 | 8800 | 150 |
| 22 | 13 | 20 | 115 | 108 | 84 | 14 | \$700 | 100 |
| 40 | 12 | 20 | 130 | 96 | 84, | 77 | \$650 | 89 |
| 8 | = | 16 | 140 | 8 | 36 | 12 | \$550 | 47 |
| 22 | 10 | 14 | 150 | 72 | 36 | 12 | \$450 | 28 |
| 8 | 6 | 12 | 150 | 62 | 8 | 10 | \$350 | 31 |
| 15 | . ∞ | 12 | 150 | 09 | 24 | 6 | \$300 | 56 |
| Horse Power | Diameter of Cylinderinches | Length of Stroke | Number of Revolutions | Diameter of Fly Wheelinches | Diameter of Band Wheel | Width of Belt | Price, including Judson governor, pump, heater, and brass mqunt- ings complete. | Shipping Weights cwt. |
| , | Į Ģ | Lei | N | Ü | Dig | W | Pri | Shi |

Large Band Wheels can be furnished when desired, instead of Fly Wheel and Pulley. The speed above given is not fixed; it can be regulated by means of a Spring Speeder on Governor.

Automatic Engines.

| 35 | horse | (9½x12) | high | speed, | Armington & | & Sims' | pattern | ı | \$600 | 00 |
|----|-------|---------|------|--------|-------------|---------|---------|---|-------|----|
| 50 | 4.6 | (11x14) | " | " | " | 46 | " | | 750 | 00 |

I carry in stock and can sell at lowest market prices, New Corliss and Wheelock Engines. Prices and description on application.

Marine Engines and Boilers.

These I have manufactured, specially for my customers, to order, in sizes from 4x4 to 20x22, and can furnish for prompt delivery. I append prices for a few of the smaller sizes, but prefer to have specifications of boat for larger sizes.

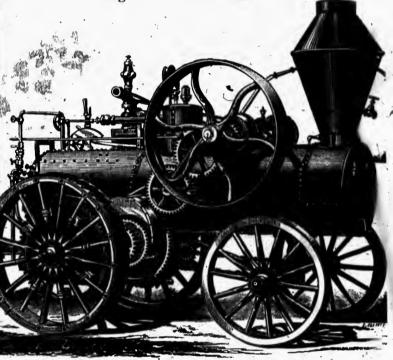
| 4x4 with Steel Boiler, and having suitable wheel and shaft and | |
|--|-----------------|
| all connections. | \$300 00 |
| 6x4 with Steel Boiler, and having suitable wheel and shaft and | |
| all connections | 400 00 |
| 6x6 with Steel Boiler, and having suitable wheel and shaft and | - |
| all connections. | 575 00 |

Portable Engines and Boilers.

Engines mounted on Boilers and complete with all fittings and connections, including necessary boiler feed and smoke stack. Boiler on skids.

| | er | |
|----------|---------|----------|
| 30 🦿 " " | | 1,125 00 |
| 35 | | 1,300 00 |
| 40 | * | 1,450 00 |
| 50 | <u></u> | 1,750 00 |

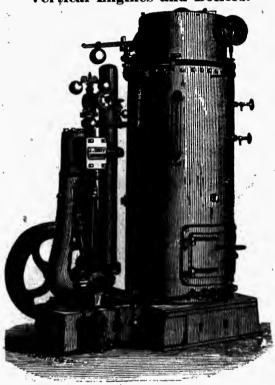
Western Empire Portable and Traction Engines and Boilers.



LOCOMOTIVE PATTERN-WATER BOTTOM.

| | PORTABLE, 12 horse power, on trucks, with patent spark | | 4 | |
|---|---|---------|-----|---|
| í | arrester and smoke stack, 7 x12-in. cylinder | \$750 O | 0 - | |
| | Do., 16 horse power, on trucks, with patent spark arrester and | , | | |
| | smoke stack, 8½x12-in, cylinder | 900 0 | 0 | |
| | Do., 20 horse power, on trucks, square bottom fire box, 10x14-in. | ` | | |
| | cvlinder | 1,200 0 | 0 | |
| | Do., 25 horse power, on trucks, square bottom fire box, 12x14-in | | | |
| | cylinder | 1,500 0 | 0 | |
| | SINGLE TRACTION, 12 horse power, on trucks | 1.050 0 | Õ | |
| | Do., 16 horse power, on trucks | 1.250 0 | 0 | ÷ |
| | DOUBLE TRACTION, 12 horse power, on trucks, | 1 150 0 | ň | |
| | Do., 16 horse power, on trucks | 1 300 0 | ň | , |
| | Doi, to notee power, on stucks | ,000 | ~ | |
| | | | | |

Vertical Engines and Boilers.



PRICE LIST.

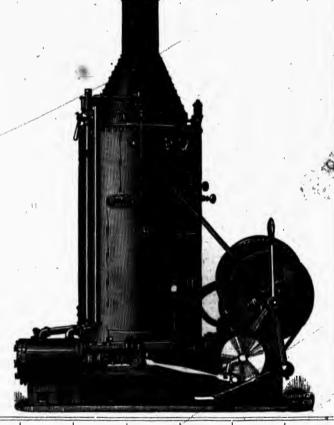
| No. | Complete Rigs. | Boiler with Fittings. | Engine with Fittings. |
|-------------|----------------|-----------------------|-----------------------|
| 1 | \$278 00 | \$145 00 | \$122 00 |
| $\tilde{2}$ | 345 00 | 165 00 *- | 148 00 |
| 3 . | 395 00 | 180 00 | 172 00 |
| 4 | 445 00 | 200 00 | 195 00 |
| 5 | 545 00 | 225 00 | 225 00 |
| 6 | 610 00 | 265 00 | 300 00 |
| 7 | 710 00 | 325 00 | 350 00 |
| 8 | 875 00 | 400 00 | 400 00 |

TABLE OF DIMENSIONS, WEIGHTS, ETC.

Doty Vertical Engines and Boilers.

| | 1 | | | | | | | | | |
|--------------------------------|---------------------------------------|------|------------|---------|---------|---------|---------|------------|----------|-----------|
| rine | Weight. | lbs. | 1200 | 1600 | 2000 | 2700 | 3300 | 4000 | 4800 | 2200 |
| Combined Engine and Boiler. | Height over all. | In. | 3 8 | 8 | 8 | 28 | 33 | -96 | 901 | 106 |
| Combine | Floor Space Occupied | In. | 26 x 48 | 30 x 20 | 34 x 60 | 34 x 60 | 36 x 70 | 40 x 72 | 44 x 84 | 48 x 90 |
| | Square Feet of Heating Surface. | | 51 | 7.5 | 98 | 92 | 125 | 162 | 202 | |
| ı. | Length of Tubes. | Ip. | 31 | 9 | 36 | 41 | 46 | 46 | 52 | / |
| Boiler. | Size of Tubes. | Į. | 63 | 63 | 63 | 61 | 63 | 61 | 67 | 8 |
| | Number of Tubes. | | 77 | 37 | 4 | 4 | 8 | 2 | 8 | - |
| | Length of | In. | 84 | 8 | 8 | 99 | 22 | 22 | # | 25 |
| | In ameter of Shell. | la. | 24 | 88 | 8 | 8 | 34 | 37 | 9 | 4 |
| | Revolutions per minute. | | 8 | 180 | 180 | 160 | 160 | 150 | 150 | 140 |
| | Width of Face. | l i | 32 | 42 | 香 | 63 | 42 | 3 5 | क | 12 |
| ine. | Diameter of Band Wheel. | Į. | 8 | 25 | 98 | 88 | 32 | 98 | 9 | 35 |
| Engine. | Stroke. | I. | 4 | 9 | 9 | 2 . | œ | 6 | 00 | 6 |
| | Diameter of Cylinder. | In. | 4 | 4 | 10 | Ž, | 63 | 2 | 90 | 6 |
| | Ногзе Ромет. | 1 | ့က | 4 | 20 | 9 | 00 | 10 | 13 | 15 |
| | No. | - | - | 67 | ಣ | 4 | 10 | 9 | 1 | œ |

Portable Hoisting Engines.



| No. | Single Cylinder. | Double Cylinder. | Price, One Drum. | Price, Two Drums. | 'Wheels, Extra. | Foot Brake, Extra. |
|------|---------------------|---------------------|------------------------|-------------------------|--------------------|--------------------------|
| 1. 2 | 6 x 12 7 x 12 | 61 x 8 | \$700 750 | \$750 875 850 | \$75 75 75 | \$25 25 25 |
| 4 | | 6 x 12 7 x 12 | 875 950 | 1,000 1,075 | 100 100 | 25 25 |

Brick and Tile Machinery.

Baird's Patent.

| Brick and Tile combined | \$425 00 |
|-------------------------|----------|
| Brick, single | 375 00 |
| Tile, single | |
| Clay Crusher | 225 00 |

The Baillie Patent Combined Brick and Tile Machine.

| Steam 1 | Power I | oubl | e A | ctiı | ıg | N | L a | cł | ii | 1e | | | | | | | | | | 8 | 400 |) (| 00 |
|----------|----------|-------|------------|------|----|----|------------|----|----|----|---------|--|------|--|----|----|--|------|-----|---|-----|-----|----|
| Horse | " | " | | " | | | • | 6 | | | | | | | | | | | | | 325 | • | 00 |
| Dies for | · double | 2½-i1 | ı. T | ile. | ٠. | | | | | | | | | | | | | | | | 7 | • | 00 |
| " | 44 . | 3-in. | Til | e | | | | | | | | | | | ٠. | | | , | | | 7 | • | 00 |
| 66 - | single | 4 " | " | | | | | | | | | | | | | ٠. | | | | | , 5 | , | 00 |
| 44 | " | 5 " | " | ٠. | ٠. | | | | | | | | | | | | | | | | 5 | , | 50 |
| 44 | " | 6 " | " | ٠. | | | | | ٠. | | | | | | | | | | | | 6 | ; | 00 |
| 46 | - 44 | | | | | | | | | | | | | | | | | | | | 6 | 3 | 50 |
| 66 | " | 8 " | 46 | | | | | | | | ٠. | | | | | | | | ٠,٠ | | 7 | • | 00 |
| 1 Set B | rick Die | 8, W | bod | line | ed | | | | | | ٠. | | | | | | | | | | 3 | • | 00 |
| 2 Brick | Tables. | | | | | ٠. | | | | | | | | | | | | | | | 16 | , | 00 |
| 2 Tile T | ables | | . . | | | | | ٠. | | | . 4 | | ٠. | | | | | | | • | 16 | , | 00 |

The Henry Martin Brick Machine.

| No. 1, for steam power | \$500 | 00 |
|------------------------|-------|----|
| No. 1, for horse power | 425 | 00 |
| Tile Attachment, extra | 200 | 00 |

N.B.—I can always supply either new or second-hand Engines and Boilers, suitable to run a brick yard with one or more machines, and any style that customers may prefer—portable, upright or stationary, and with necessary shafting belting and fittings, for prompt delivery.

Duplex Steam Pumps.

(Send for Circulars.)

| Steam r. | /ater | | minute. | minute, gers. | | leng | ths. to | es for be in th incr | creas- |
|--------------------------|---------------------------|--------------------------|---|--|-----------------------------------|----------------------------|--|----------------------------|-------------------------|
| Diameier St Cylinder. | Diameter W Cylinder. | Stroke. | Strokes per | Gallons per min both Plungers. | Price. | Steam Pipe. | Exhaust. Pipe. | Suction Pipe. | Discharge Pipe. |
| 5½ 6 7½ 9 | 3½ *4 4½ 5¼ 6 | 5 7 10 10 10 | 75 to 150 75 "125 75 "100 75 "100 50 "100 | 30 to 60 50 " 90 70 " 140 90 " 185 125 " 245 | \$160 200 275 340 400 | 1 1 1 1 1 2 | $\begin{array}{c c} 1\frac{1}{4} \\ 1\frac{1}{2} \\ 2 \\ 2\frac{1}{2} \end{array}$ | 2½ 2½ 4 4 4 | 1½ 2 2½ 3 3 |

These Pumps are manufactured to order specially for my trade. I can also furnish larger sizes, and including Mining Pumps and Pumps for special service, for prompt delivery. Write for prices.

The New "Otto" Silent Gas Engine.

SAFETY! CONVENIENCE! ECONOMY!

Started instantly with a match. Always ready to give out its full power at once. Expense ceases when Engine stops. No boiler, no gauges, no coal, no fires, no steam, no pumps, no explosions, no danger, no ashes, no engineer, no extra insurance, no unpleasant heat, almost no attendance. Where power is required at intervals it is the cheapest motor known. Over 10,000 in use.

| 2 | Horse | Power, | complete | | \$400 00 |
|----|-------|--------|--------------|---|----------|
| 4 | " | 44 | " | | 575 00 |
| 7 | 66 | 66 | 66 | | 765 00 |
| 10 | | " | THE R. T. T. | Ÿ | 965 00 |



PRICE (on frame as shown in cut).

| 2 | , | в | \$375 00 450 00 |
|-----|-----|---|--------------------|
| " 3 | * " | *************************************** | 550 00 |
| " 5 | , " | *************************************** | 750 00 |

SMITH EXHAUST FAN-DOUBLE.

| | Smith | Exhaust | Fan. |
|---|--|--|--|
| Weight. | £88888 | 1,100 | 8000 88 92 92 92 92 92 92 92 92 92 92 92 92 92 |
| No. of Revolutions per Minute. | 3,500 to 4,000 2,800 to 3,200 2,500 to 3,000 2,300 to 2,800 2,000 to 2,400 | 1,800 to 2,200 1,600 to 1,900 1,550 to 1,700 1,450 to 1,650 1,400 to 1,600 | 3,500 to 4,000 2,800 to 3,200 2,800 to 2,800 1,900 to 2,800 1,600 to 1,900 1,450 to 1,650 |
| Face of Pulley, | 94 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | 1 | 22 inch. |
| Diameter of Pulley. | 4 4 4 inch. 5 6 6 | . 10 | .4 inch. 5 61 77 |
| Diameter of Blast Wheels | 111 inch. 122 · · · · · · · · · · · · · · · · · · | | i |
| No. of Squ're No. of Squ're In. Inlet. In. Ontlet. | 114 170 234 286 338 | 440 493 546 600 654 | 60 85 143 195 245 300 |
| No. of Squ're In. Inlet. | 200 200 200 200 200 200 200 200 200 200 | 255 255 255 255 255 255 255 255 255 255 | 50 125 175 225 275 |
| Price. | 860 100 150 150 150 150 150 150 150 150 15 | 200 200 200 200 200 200 200 200 200 200 | \$40 00 50 00 100 00 175 00 |
| No. of Fan. | 88 410 G | 8601121 | 1000450 |

Larger sizes built to order. In ordering, be particular to state if the Pulley is wanted on the right or left side, as you stand behind the fan looking in the direction the shavings are to be discharged. They are built both right and left hand.

The Smith Cupola, Forge and Pressure Blowers.

| ن ن | Sizes. | No. 1. | No. 2. | No. 3. | No. 4. | No. 5. | No. 6. |
|---|--------|-----------|----------------------|-------------------------|--------------------------------------|----------------------|-----------------------|
| Prices, without Counter Shaft | | \$15 00 | \$30 00 | \$45 00 | | <u> </u> | \$180 36 00 |
| | | 7000 | 6000 6000 6000 | 0004 0004 0004 | 3200 3200 3200 3200 3200 | 1750 2750 2750 | 1400 1750 2150 |
| 12-oz -oz.] -oz.] | | 0.1 | 000 | 0.55 | | | 9 9 9 9 9 |
| H.P., at 9-oz. Blast. H.P., at 12-oz. Blast. Area of Outlets, sq. in | | 15 | | . 1.5 | | | 175 |
| Sizes of Pulleys. Height to centre of Shaft. Extreme widths. | 4 | 73 104 | 3X15 104 144 | 134 134 185 18 | | | 42 <u>88 8</u> |
| Centre to centre of runeys Diameter of round outlet pipe Weight complete, in pounds | | 202 | | g [™] g | | | 375 |

Fans and Blowers.

Wing's Disc Fans or Exhausters.

One of the most successful machines of the age. Thou sands in use. Sales constantly increasing. This light run ning power Fan will move fully six times as much air a the centrifugal or usual exhaust fans and blowers, and i invaluable for drying, removing steam, dust, smoke, gase heat, etc., and for general ventilation and cooling.

(Send for Special Catalogue.)

| | Dia. | Wide. | Pulley. | |
|-----|------------|----------------|---------|--------|
| No. | 1. 12 inch | ies, 8 inches, | 2 x 11 | \$30 0 |
| 66 | 2. 18 " | 10 " | 3 x 1½ | 40 0 |
| " | 3. 24 " | e 12 " | 4 x 2 | 50 0 |
| | | - 13 '' | 5 x 3 | 65 0 |
| | 5. 36 | 14 " | 6 x 3 | 85 0 |
| " | 6. 42 | 15 " | 7 x 4 | 105 0 |
| " | 7. 48 " | 16 " | 8 x 4 | 125 0 |
| " | 8. 54 " | 17 " | 9 x 5 | 160 0 |
| " | 9. 60 | 18 , " | 10 x 6 | 200 0 |

SKELETON FANS.

| | | Di | а. | Pulle | y. | | |
|-----|-----|-----|---------|-------|----|-----------|---|
| No. | 10. | 72 | inches, | 12 x | 7 | \$175 | 0 |
| " | 11. | 84 | " | | | | |
| " | 12. | 96 | " | 16 x | 10 | 240 | 0 |
| . " | 13. | 108 | " | 20 x | 12 | 280 | 0 |

24 x 12 . Prices for extra sizes given on application.

14. 120

Fans fitted to run horizontally from \$6.00 to \$15.00.

The Smith Special Exhaust Fan.

| umber. | Square Inches. Area to Inlet. | Pulley. Dia. of Face. | Speed. | Price. | Weight. |
|--------|-------------------------------|-----------------------|----------------|---------|-----------|
| | 12 | In. In. 2 x 118 | 4,000 to 5,000 | \$15 00 | 8 |
| | 55 | 3 x 14 | 3,000 to 4,000 | 25 00 | 23 |
| | 40 | 4 x 24 | 2,500 to 3,500 | 40 00 | 08 |
| | 20 | 70 S | 2.000 to 3.000 | 00 09 | 180 |

FOR REMOVING DUST FROM EMERY WHEELS, GRINDSTONES, FOUNDRY RATTLERS, OR ANY MATERIAL OF THE SAME NATURE. For Boston Blower Co.'s Dry Kilns, Fans, Blowers and Exhausters, send for special catalogue, giving as, full particulars of your requirements as possible, so as to save correspondence and delay in giving a full quotation.



The Pickering Governor.

This Governor, by its a curate regulation and goo workmanship, will commend itself wherever used

We guarantee to regulate accurately any stylor or size of engine, and under all circumstances.

For durability in al its parts, simplicity of construction, and economy in fuel, it cannot be equalled Having no joints, it

action is direct thereby insuring greater sensitive ness than can be secure with any other Governor.

In ordering Governors be particular to specify the style wanted.

If no special dimension are given, Governors will be sent according with the table below:

| | | | | | | | | - | - | ^ |
|--------------------------------------|----------------------------|---|--|--|--------------------------------------|--|--|--|---|---|
| Size of Valve or Steam Pipe. | Portable. | Plain. | Finished. | Speeder, Extra. | Stop Motion and Speeder Extra. | Dia. of Cylinder suitable for. | Extreme Heig't. | Dia. of Base Flange. | Dia. of Pulley advisable. | Rev. per Minute for Fig. 1. |
| | | | | | | In. | In. | In | In. | |
| In. 14 14 12 21 3 34 44 2 6 6 7 8 10 | \$15 | \$16 | \$17 | \$1 50 | | 2 to 3 | In. 14 14½ 18 19 25 26 | In. 31/2 4 41/2 5 6 7 71/2 9 10 11 11 12 13 14 16 18 | In. 1 2 2 2 1 2 2 2 2 3 4 4 5 5 6 6 6 7 8 | 500 |
| 3 | | 18 | 19 | \$1 50 1 50 2 00 2 50 2 50 2 50 3 00 3 50 | | 2 to 3 3 to 4 4 to 5 5 to 6 6 to 8 | 141 | 4 | i | 500 |
| 1 | 16 18 20 23 27 | 20 | 22 | 2 00 | \$4 | 4 to 5 | 182 | 41 | 2 | 400 |
| 11 | 20 | 20 22 26 30 41 45 54 64 74 84 115 | 22 23 28 32 43 52 62 73 84 95 130 155 188 235 | 2 50 | 4 | 4 to 5 5 to 6 6 to 8 | 19 | 5 | 2 | 400 |
| 15 | 23 | 26 | 28 | 2 50 | 4 4 6 7 8 9 | 5 to 6 6 to 8 | 25 | 6 | 21 | 380 |
| 2 | 27 | 30 | 32 | 3 00 | 6 | 8 to 10 | 26 | 7 | 25 | 500 500 400 400 380 360 300 300 250 250 250 250 250 |
| 21 | 36 | 41 | 43 | 3 50 | 7 | 10 to 12 | 30 35 36 | 71 | 3 | 360 |
| 3 | | 45 | 52 | 4 25 | 8 | 12 to 15 | 35 | 9 | 4 | 300 |
| 31 | | 54 . | 62 | 4 50 | 9 | 14 to 17 | 36 | 10 | 4 | 300 |
| 4 | | 64 | 73 | 5 00 | 11 | 16 to 20 | 42 | 11 | 5 | 300 |
| 41 | | 74 | 84 | 5 50 6 00 | 12 14 16 18 20 25 | 18 to 22 | 42 | 11 | 5 | 300 |
| 5 | ***** | 84 | 95 | 6 00 | 14 | 20 to 25 | 48 | 12 . | 5 | 250 |
| 6 | | 115 | 130 | 7 00 | 16 | 24 to 30 | 48 52 | 13 | 6 | 250 |
| 7 | | 140 | 155 | 8 00 9 00 12 00 | 18 | 28 to 35 | 54 | 14 | 6 | 250 |
| 8 | | 170 | 188 | 9 00 | 20 | 32 to 40 | 56 | 16 | 7 | 250 |
| 10 | | 205 | 235 | 12 00 | 25 | 40 to 50 | 66 | 18 | 8 | 225 |

Wood Yard Machinery.

(Send for Circular with Testimonials.)

HILD-RETH'S PATENT



Winnie Hoop Machinery,

(Send for Special Catalogue.)

| (com je isperim com je is | | |
|-------------------------------------|-------|----|
| Two-Saw Hoop Bolter | \$110 | 00 |
| Hoop Re-Sawing Machine | 95 | 00 |
| Trop to bawing Magnino | 00 | |
| ricop Pointing and Scarning Machine | 100 | |
| Double Hoop Planer | 130 | 00 |
| Hoop Coiling Machine | 90 | 00 |
| | | |

suitable to drive these, second hand, but e with swinging cradle, 28-in. saw.

"Duplex" Die Stocks,

For Gas, Water and Steam Pipes.



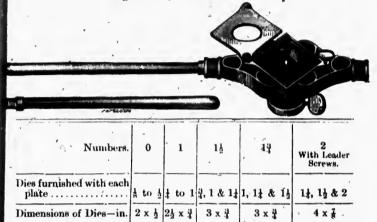
BOTH GUIDES AND DIES INSTANTLY ADJUSTABLE.

LIGHT, STRONG, COMPACT, SIMPLE AND VERY EASILY OPERATED.

| | | ŀ | OR 1 | HRE | · ' . ADIN | G. | | ٨. | WITH CUT- | | WI'CUT- | | | TRA |
|----------------|--|--------------------------|--|-----------------|----------------|------|-----|----|----------------|----------------------------|------------------|----------------------------|------------------|----------------------------|
| No. 1 2 31 4 5 | 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1 | 143, 143, 2, 3, | 1, 1, 2, 3, 3, 3, 3, 4, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, | 2, 11, 3, | 1, 1, 1, | 11/2 | Pip | 9 | 22 25 40 | 00 00 00 00 00 | , 25 28 45 | 00 00 00 00 00 | 1 2 2 3 | 50 75 00 00 50 |

Solid Die Plates.

For cutting Steam, Gas and Water Pipes.



Pipe Taps and Reamers.

\$15 00

5 00

2 00

35

30

\$13 50

6 00

2 50

45

40

\$13 50

6 00

2 50

45

40

\$20 00

9 60

3 50

50

\$9 50

3 50

1 50

25

Die Plates with R. H.

Dies complete

Die Plates without Dies.

Extra Dies, R. or L.
Hand
Extra Bushings, each...

Die Frames, each.....



Pipe Taps with Right or Left Hand Threads and Reamers. are made of the following sizes and kept in stock. Pipehobs, § to 6-inch diameter, are furnished to order at special prices.

| Diameter. | Price. | Diameter. | Price. | Diameter. | Price. |
|-----------|------------------------|----------------|------------------------|------------------------|---------------------------|
| inch | \$1 12 1 25 1 50 | 1 inch 11 " | \$3 12 3 75 4 62 | 2½ inch 3 " 3½ " | \$10 50 15 00 22 00 |
| d " | 1 87 2 50 | 2 " | 6 25 . | | 33 00 |

Reece's New Screw Plates.



Cut showing Size C, Complete in Box.

| Price | Complete. |
|--|-----------|
| Size A, same style. Cuts 1, 16, 3, 76 and 1 inch | \$13 00 |
| Size B, same style. Cuts $\frac{1}{2}$, $\frac{4}{8}$, $\frac{7}{8}$, and 1 inch | 21 00 |
| Size C, same style. Cuts 1, 5, 3, 7, 1, 2, 5 and 1 inch | . 20 00 |
| Size D, same style. Cuts $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{3}{8}$, $\frac{3}{8}$, and 1 inch | 25 00 |
| Size E, same style. Cuts 1, 16, 1, 16, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, | . 29 00 |
| Size F, stock 53 inches long. Cuts 12, 12, 12 and 12 inch | . 45 00 |
| | - |

Prices of Taps, Dies, etc., for Reece's New Screw Plate.

| Diam. Inch. | No of Threads to Inch. | Price of Tap. | Price of Die. | Tap, Die and Collet. |
|----------------|---------------------------|------------------|---------------|-------------------------|
| 1 | 18 and 20 | \$0 45 | \$1 25 | \$2 30 |
| 10 | 16 and 18 | 50 | 1 25 | 2 35 |
| 4 | 14 and 16 | 55 | 1 50 | 2 65 |
| 7 | 14 | 60 | 1 50 | 2 80 |
| i | 12 and 13 | 70 | 1 75 | 3 05 |
| 1.2 | 12 | 89 | 1 75 | 8 15 |
| 16 | 10 and 11 | 90. | 1 75 | 8 25 |
| 11 | 11 | 1 05 | 1 75 | 3 40 |
| 1 | 10 | 1 20 | 2 00 | 3 80 |
| 18 | 10 | 1 40 | 2 00 | 4 00 |
| i | .9 | 1 60 | 3 00 | 5 20 |
| 18 | 9 | 1 80. | 3 00 | 5 40 |
| 1 | 9 8 | 2 00 | 3 00 | 5 60 |
| 11 | 7 | 2 25 | 4 50 | 8 75 |
| 11 | 7 | 2 60 | 4 50 | 9 10 |
| 14 | 6 | 3 00 | 6 00 | 11 00 |
| | . 6 | 3 50 | 6 00 | 11 50 |

Machinists' Stocks and Dies.

No. 1, with 5 prs. Dies, cutting $\frac{1}{4}$, 20; $\frac{5}{16}$, 18; $\frac{3}{8}$, 16; $\frac{7}{16}$, 14; $\frac{1}{2}$, 12; \$7.00.

No. 2, with 4 prs. Dies, cutting $\frac{7}{18}$, 14; $\frac{1}{2}$, 12; $\frac{1}{2}$, 11; $\frac{3}{2}$, 10; \$8.00.

No. 3, with 4 prs. Dies, cutting §, 11; ‡, 10; 7, 9; 1, 8; \$10.00.

No. 4, with 4 prs. Dies, cutting 3, 10; 7, 9; 1, 8; 11, 7; \$13.00.

No. 5, with 4 prs. Dies, cutting 1\frac{1}{8}, 7; 1\frac{1}{4}, 7; 1\frac{3}{8}, 6; 1\frac{1}{2}, 6; \$25.00.

No. 6, with 5 prs. Dies, cutting 1½, 6; 1½, 5; 1¾, 5; 1¼, 4½, 2, 4½; \$33.00.

The above prices do not include Taps.

In ordering, state whether Plug or Taper Taps'. are required.

For price of Taps see page 43.

UTTERFIELD &CO

| Extra | Dies | for No. | 1 | Plate | | | | | | \$1 | 100 | , |
|-------|------|---------|---|-------|--|--|------|-----|------|---------|-----|---|
| 44 | 66 | | 2 | " | | | | | | 1 | 25 | |
| " | " | | 3 | 44 | | | | | | 1 | 75 | , |
| 66 | " | | 4 | " | | | | | | 2 | 00 | , |
| 46 | 66 | | 5 | " | | | | • • | | 3 | 50 |) |
| " | " | | 6 | " | | | | | | 4 | 00 |) |

Tap Wrenches.

These Wrenches are well finished in every respect, have Steel Dies, and are strong and durable.

| No. | 1, | 8 12 | inches | long, | fitting | Taps | to | inch | | \$1 2 | 50 00 |
|-----|----|---------|--------|-------|---------|------|------|---------------|------------|----------|----------|
| •• | ч. | 14 | •• | •• | " | 46 | to i | - 66 | ********** | -3 | -00 |
| | 4, | 17 | 66 | " | " | " | to | 11 " | | ., 4 | 00 |
| " | 5, | 24 | 66 | " | 66 | " | to ! | L <u>\$</u> " | | . 5 | 25 |

Blacksmiths' Stocks and Dies

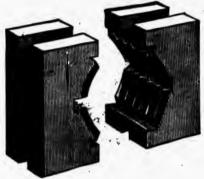
1

| Blacksmiths' Stocks and Dies | • | |
|--|------|-----------|
| | Pri | ce. |
| No. 6.—Cuts 11 in to 1 in. Right Hand, 8 threads | | |
| to inch; cuts 1 in. to 1 in. Left Hand, | | 00 |
| No. 11.—Cuts 11 in. to 8 in. Right Hand, 8 and | \$20 | UO |
| 10 threads to in.; cuts 1½ in. to 3 in., | | |
| Left Hand, 8 threads to in.; 4 Taps and | | |
| 3 sets of Dies | 10 | 00 |
| No. 15.—Cuts 14 in. to 1 in. Right Hand, 8, 10 | | |
| and 12 threads to in.; 5 Taps and 3 sets of Dies | 10 | 00 |
| To. 21.—Cuts 1 in. to 1 in. Right Hand, 9 and | | |
| 12 threads to in.; cuts 1 in. to \(\frac{3}{4}\) in., Left | | |
| Hand, 9 threads to in,; 4 Taps and 3 sets | e | ۸۸ |
| of Dies | 0 | 00 |
| and 14 threads to in.; 3 Taps and 3 sets of | | |
| Dies | 5 | 00 |
| No. 32.—Cuts 2 in. to 8 in. Right Hand, 10 and | | |
| 14 threads to in.; cuts \(\frac{3}{2} \) in. to \(\frac{3}{2} \) in. Left | | |
| Hand, 10 and 14 threads to in.; 4 Taps | 5 | 00 |
| No. 33.—Cuts $\frac{3}{2}$ in. to $\frac{1}{2}$ in. Right Hand, 10 | | |
| threads to in.; cuts 4 in. to 4 in. Left | | |
| Hand, 10 threads to in.; 2 Taps and 2 | 4 | 00 |
| sets of Dies | 4 | vv |
| and 16 threads to in.; 3 Taps and 3 sets | | |
| of Dies | 4 | 50 |
| No. 34A.—Cuts \(\frac{3}{4}\) of an in. to \(\frac{1}{16}\) in. Right Hand, | | 1 |
| 10, 12 and 14 threads to in.; 3 Taps and | 4 | 50 |
| No. 34B.—Cuts $\frac{3}{4}$ in. to $\frac{5}{16}$ in. Right Hand, 12, 14 and 16 | * | 00 |
| threads to in.; 3 Taps and 3 sets of Dies | 4 | 50 |
| No. 35.—Cuts \(\frac{3}{2}\) in. to \(\frac{3}{2}\) in. Right Hand, 10 and 14 threads to | | |
| in.; 2 Taps and 2 sets of Dies. | 4 | 00 |
| No. 37.—Cuts & in. to 18 in. Right Hand, 14, 18 and 22 threads | 4 | 25 |
| to in.; 6 Taps and 3 sets of Dies | • | 1 |
| threads to in.; 6 Taps and 3 sets of Dies | 4 | 25 |
| No. 37B.—Cuts 4 in. to A in. Right Hand, 14, 16 and 18 | | ~ |
| No. 38.—Cuts § in. to A in. Right Hand, 12 and 18 threads | 4 | 25 |
| to in.; cuts § in. to 18 in. Left Hand, 12 threads to in.; | | |
| 6 Taps and 3 sets of Dies | | 50 |
| No. 41.—Cuts ½ in. to ½ in. Right Hand, 16, 20 and 26 threads | • | ~ |
| to in.; 6 Taps and 3 sets of Dies | | 25 |
| No. 41A.—Cuts \(\frac{1}{2} \) in. to \(\frac{1}{2} \) in. Right Hand, 14, 16 and 18 threads to in.; 6 Taps and 3 sets of Dies | | 25 |
| No. 41B.—Cuts 1 in to 1 in. Right Hand, 16, 18 and 20 | | - |
| No. 41B.—Cuts ½ in to ½ in. Right Hand, 16, 18 and 20 threads to in.; 6 Taps and 3 sets of Dies. | -3 | 25 |
| No. 42.—Cuts 1 in. to 1 in. Right Hand, 14 and 20 threads | | |
| to in.; cuts $\frac{1}{4}$ in. to $\frac{6}{16}$ in. Left Hand, 14 threads to in.; 6 Taps and 3 sets of Dies | | 50 |
| No. 53.—Cuts 4 in. to 4 in. Right Hand, 16, 20, 24 and 32 | | 55 |
| threads to in.; 4 Taps and 4 sets of Dies | | 75 |
| | | |

Blacksmiths' Stocks and Dies.

| B B III DIGCESIIII SIVERS BIR DIG | 13 • | |
|---|--------------|----|
| | rice. | |
| No. 1.—Cuts 2 in. to 1 in. Right Hand, 41 | 1100 | • |
| and 7 threads to in.; cuts 2 in. to 1 in. | | |
| Left Hand, 4½ and 7 threads to in.; | | |
| 8 Taps and 4 pairs of Dies\$ | 50 OC |) |
| No. 2.—Cuts 2 in, to 3 in. Right Hand, 41, | | |
| 6, 7 and 8 threads to in.; 8 Taps and | | |
| 4 pairs of Dies | 80 OO |) |
| No. 3.—Cuts 13 in. to 3 in. Right Hand, 6 | | |
| and 8 threads to in.; cuts 13 in. to | | |
| in Left Hand, 6 and 8 threads to | | |
| in.; 8 Taps and, 4 pairs of Dies | 45 00 | 0 |
| No 4.—Cuts 13 in. to 3 in. Right Hand, | | |
| BUTTERFIELD acc 6, 7, 8 and 9 threads to in.; 8 Taps | | |
| | 45 00 | ο, |
| No. 5.—Cuts 1½ in. to ¾ in. Right Hand, 8 | Dies. | |
| and 9 threads to in.; cuts 11 in. to 2 | | |
| in. Left Hand, 8 and 9 threads to in.; | | |
| 8 Taps and 4 pairs of Dies | 35 00 | 0. |
| No. 5½.—Cuts 1½ in to ½ in. Right Hand, 6, | | , |
| 7, 8 and 9 threads to in.; 8 Taps and | ' | |
| 4 pairs of Dies | 3 5 0 |) |
| No. 7.—Cuts 12 in. to § in. Right Hand, 8 | | |
| and 10 threads to in.; cuts 11 in. to 7 | | |
| in. Left Hand, 8 threads to in.; 6 | | |
| | 12 0 | 0 |
| No. 9.—Cut 1½ in. to ½ in. Right Hand, | | |
| 8, 10 and 42 threads to in.; 6 Taps | | |
| and 3 pairs of Dies | 12 00 |) |
| No. 17.—Cuts 1 in. to 1 in. Right Hand, 9 | | |
| and 12 threads to in.; cuts 1 in. to 3 | | |
| in. Left Hand, 9 threads to in.; 6 | | ^ |
| Taps and 3 pairs of Dies | 9 0 | U |
| No. 19.—Cuts 1 in. to § in. Right Hand, 9, 12 and 14 threads | 0 0 | ^ |
| to in.; 6 Taps and 3 pairs of Dies | 9 0 | U |
| No. 25.—Cuts \(\frac{2}{4}\) in. to \(\frac{4}{2}\) in. Right Hand, 10 and 16 threads to in.; cuts \(\frac{2}{4}\) in. to \(\frac{1}{2}\) in. Left Hand, 10 threads to in.; 6 | | |
| Taps and 3 pairs of Dies | 6 5 | Λ |
| No. 27.—Cuts \(\frac{3}{4}\) in. to \(\frac{3}{6}\) in. Right Hand, 10, 12 and 16 threads | 00 | |
| to in.; 6 Taps and 3 pairs of Dies | 6 5 | 0 |
| No. 45.—Cuts § in. to 16 in. Right Hand, 12 and 16 threads to | 0 0 | • |
| in.; cuts § in. to $\frac{1}{16}$ in. Left Hand, 12 threads to in.; | | |
| 6 Taps and 3 pairs of Dies | 5 5 | 0 |
| No. 47.—Cuts § in. to ‡ in. Right Hand, 12, 14 and 18 threads | | |
| to in.; 6 Taps and 3 pairs of Dies | 5 5 | 0 |
| No. 49.—Cuts 1 in. to 1 in. Right Hand, 14 and 18 threads to | | |
| in : cuts * in. to * in. Left Hand. 14 threads to in.: | | |
| 6 Taps and 3 pairs of Dies | 4 5 | 60 |
| No. 51.—Cuts 1 in. to 1 in. Right Hand, 14, 18 and 22 | | |
| 6 Taps and 3 pairs of Dies. No. 51.—Cuts ½ in. to ½ in. Right Hand, 14, 18 and 22 threads to in.; 6 Taps and 3 pairs of Dies. | 4 5 | 60 |
| No. bu. — cuts 7 in. to 8 in. Right Hand, 10, 12, 14 and 18 | | |
| threads to in.; 6 Taps and 4 pairs of Dies | 6 5 | 60 |
| 90 | | |

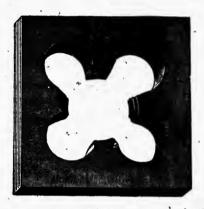
Prices of Extra Dies.



| | A | | | | | | | |
|---------|--------|------|--------|------|----|--------|---------|---------------------|
| For No. | 1 01 | 2 | Stock | \$12 | 00 | For : | No. 33 | Stock, \$1 50 |
| " | 3 ' ' | 4 | 44 | 10 | 00 | " | 34, 34 | A, 34B, " 2 00 |
| " | 5 " | 51 | " | 8 | 00 | " | 35, 37, | 38, 41, 42, 41A, |
| " | 6 " | | 44 | 6 | 00 | | 41B, 3 | 7A, 37B, Stock 1 50 |
| " | 7 " | 9 | 44 | 3 | 50 | 174 66 | | Stock 2 25 |
| 66 | 11 " | 15 | 44 1 | 3 | 00 | " | .49 " 5 | 1 " 2 00 |
| 66 | 17 " | 19 | 66 | 2 | 50 | 66 | 53 | " 1 50 |
| 44 | 21 ' | . 23 | 66 | 2 | 00 | 66 | 60 | " , 3 00 |
| 66 | 25, 27 | | 32 " . | | 25 | 1 | | |

Blacksmiths' Extra Taper and Plug Taps.

| | | NUMBER O | F THREAD | S TO INCH, | , | PRICE | |
|---------------------|------|-----------------------|------------------|------------|------------------|--------|--|
| SIZK. | | Right. | Taps in each box | Left. | Taps in each box | EACH. | |
| i in | nch. | 30 and 32 | 6 | | : | \$0 30 | |
| 7.0 | " | 24 and 26 | 6 | | | 0 30 | |
| THE SET I THE LEWIS | " | 18, 20, 22, 24 and 26 | 6 | | | 0 30 | |
| 18 | " | 16, 18, 20 and 22 | 6 | | l | 0 30 | |
| 8 | " | 12, 14, 16 and 18 | . 6 | | | 0 35 | |
| 78 | " | 12, 14, 16 and 18 | 6 | 14 | · 6 | 0 40 | |
| 1 | " | 12, 14 and 16 | 6. | 12 and 14 | 4 | 0 40 | |
| ·Q. | " | 12 and 14 | 6 | 12 | 4 | 0 50 | |
| 4 | " | 10, 11, 12 and 14 | 7 6 | 10 and 12 | ~4 | 0 50 | |
| ä | 46 | 8, 9, 10 and 12 | 6 | 10 and 12 | | 0 65 | |
| 1 | " | 9 and 10 | 4 | 9 | 4 | 0 90 | |
| | 46 | 7, 8 and 9 | . 4 | 8 and 9 | 2 | 1 25 | |
| 1 | 44 | 6, 7, 8 and 9 | 2 2 | 8 and 9 | | . 1 75 | |
| ī | 66 | 6, 7 and 8 | 2 | 6, 7 and 8 | | 3 00 | |



| DIAMETER. NO. THREADS | l inci | THICK'NESS. | PRICE. | DIAMETER. | NO. THREADS TO INCH. | SIZE. | THICKNESS. | PRICE. |
|--|---------|-------------|--|-----------|--|---------|-----------------------|--|
| 20 18 16 18 16 14 12 11 10 9 8 1 1 1 1 1 1 1 1 1 | 2½ x 2½ | 7in. | \$1 80 1 80 1 80 1 80 1 80 2 00 2 25 2 40 2 70 | 1 | 7 7 6 6 5 5 5 5 4 2 | 2½ x 2½ | 1 in. 1 1 1 1 1 1 1 2 | \$3 00 3 60 3 60 4 20 5 40 6 50 7 50 |

Brown's Adjustable Pipe Tongs.



| Numbers | 1 | l _ž | 2. | 3 | 4 | 5 | 6, |
|------------------|--------|----------------|---------|---------------|---------------|---------|---------|
| Takes Pipe from. | 1 to 3 | g to 1 | 1 to 11 | 1 to 2 | 11 to 3 | 24 to 4 | 3 to 5 |
| Price, each | \$1 50 | \$1 75 | \$2 00 | \$2 75 | \$4 50 | \$9 00 | \$18 00 |

Machine or Nut Taps.

V AND FRANKLIN INSTITUTE SHAPE OF THREAD.

LONG SHANK.--RELIEVED.

Unless advised to the contrary, we fill orders with V

| Diameter. | No. Threads to inch. | Price Each. | Diameter. | No. Threads to inch. | Price Each. |
|--|---|--|--|--|---|
| 4-Cr 28-71-12-07 68-18-24-26-78-18-18-18-18-18-18-18-18-18-18-18-18-18 | 16, 18 and 20 16 and 18 14 and 16 12, 14 and 16 12, 13 and 14 12 and 12 10 10 9 and 10 9 8 7 and 8 7 and 8 6 6 5 and 5½ 5 | \$0 60 70 80 90 1 00 1 15 1 30 1 45 1 60 1 80 2 10 2 40 2 80 3 20 3 70 4 20 4 70 5 30 6 00 | 12 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 4 | 4½ and 5 4½ 4½ 4½ 4½ 4 3½ 3½ 3½ 3½ 3½ 33½ 33½ 33 | \$6 80 7 70 9 00 10 20 11 50 12 50 15 00 16 50 18 00 19 75 21 50 23 00 27 00 29 50 31 00 33 50 |

We keep in stock the above, and 1/32 over size for rough iron.

In ordering always state exact diameter and thread wanted.

When exact duplicates are wanted, special orders should always be accompanied by a stub with a nut fitting same.

Machinists' Hand Taps.



TAPER.

PLUG.

BOTTOMING.

V and Franklin Institute Shape of Thread.

Unless advised to the contrary, we fill orders with the V Threads.

| | Diameter. | No. Threads to Inch. | Price Each. | Price per |
|--|---------------------------------------|----------------------|-------------|-----------|
| Taps to Set-Taper, Plug and Bottoming. | 1 | 16, 18 and 20 | \$0 45 | - \$1 35 |
| · a . | 10 | 16 and 18 | 50 | 1 50 |
| 9 | 3 | 14, 16 and 18 | - 55 | 1 65 |
| Ħ | 7, | 14 and 16 | 60 | 1 80 |
| മ് | 10 | 12, 13 and 14 | 70 · | 2.10 |
| 75 | 2 | 12 and 14 | 80 | 2 40 |
| ğ | 76 38 716 12 20 16 | 10, 11 and 12 | 90 | 2.70 |
| 50 | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 11 and 12 | 1 05 | 3 15 |
| la, | 16 | →10 and 12 | 1 20 | 3 60 |
| Д. | 13 | . 10 | 1 40 | 4 20 |
| £. | 7 6 | 9 and 10 | 1 60 | 4 80 |
| Ğ, | 18 | 9 3114 10 | 1 80 | 5 40 |
| Ĕ | 118 | 8 | 2 00 | 6 00 |
| | 111 | 7 and 8 | 2 25 | 6 75 |
| et | 18 | 7 and 8 | 2 60 | 7 80 |
| 02 | 13 | A | 3 00 | 9 00 |
| \$ | 11 | 8 | 3 50 | 10 50 |
| 8 | 13 | 5 and \$1 | | |
| 8 | 18 | 5 and 51 | 4 20 | 12 60 |
| 3 7 | 14 | 41 15 | 5 00 | 15 00 |
| 6.2 | 14 | 41 and 5 | 5 80 | 17 40 |
| | 2 | . 4½ | 6 70 | 20 10 |

Short Hob Taps.

(Add 25 per cent. for list of long Hob or Master Taps.)

| DIAMETER. | NO. THREADS TO INCH. | PRICE EACH, |
|--|----------------------|------------------|
| 1 | 16, 18 and 20 | . \$0 60 |
| 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | · 16 and 18 | 70 |
| 4 | 14 and 16 | 80 |
| , , | 12, 14 and 16 | . 90 |
| 1 | 12, 13 and 14 | 1 00 |
| , i | 12 and 14 | 1 15 |
| | 10, 11 and 12 | 1 30 |
| 11 | 11 and 12 | 1 45 |
| ' 3 | , 10 | 1 60 |
| 13 | 10 | 1 80 |
| 7 | 9 and 10 | 2 10 |
| 18 | 9 | 2 40 |
| 1 .0 | 8 | 2 80 |
| . 11 | 7 and 8 | 3 20 |
| 11 | 7 and 8 | 3 70 |
| 18 | 6 | 4 20 |
| 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 6 | 4 70 |
| 14 | 5 and 5½ | 5 30 |
| lş | 5 | , 6 00 |
| 17 | 4½ and 5 | 6 8 0 |
| 2 | 41/3 | 7 70 |

All orders are filled with Hobs exact diameter of order, with sharp V thread unless otherwise stated.

If wanted for cutting Screw Plate Dies, we make them considerably over size, but call the Hobs by the size of the bolt to be cut, and designate them as "Screw Plate Die Hobs."

Machine Screw Taps.

To avoid analysines and misunderstandings which are constantly occurring, I wish to state here, that Standard Machine Screws are not made in fractional sizes, as regards diameter. They are made to the Standard Screw Gauge, which is as arbitrary as the Standard Wire Gauge. Thus, when I inch are ordered we send No. 14-20 threads to the inch—and when 5-16 we send No. 20—16 threads to the inch—neither of these Screws fit Standard Taps, as the No. 14 is a trifle smaller than I inch, and the No. 20 is not only larger than 5-16 but is 16 threads to the inch, while the regular standard is 18 threads. Those who use these Screws will find it a great deal cheaper in the end to buy Standard Machine Screw Taps, as they can always order Screws by the number marked on the Tap, and be sure of getting them the right diameter and thread, and get them at once. The edd sizes (those differing from the Standard) in this list, are used generally for repair work and special purposes.

| No. | Diameter about | Standard threads to the inch. | Size of Drill to Drill for Tapping. | We also carry taps of the fol- lowing threads. | Price per Dozen | Price Each. |
|--------------------------------------|-------------------------------|-------------------------------------|---|--|-----------------------|----------------|
| 2 | 3 S 3 S 3 S 5 F | 56 | No. 53 | 48, 64 | \$4.00 | \$ 0 35 |
| 3 | J. S | 48 | " 48 | 40, 56 | 4 00 | 35 |
| 4 | F | 36 \ | " 43 | 32, 40 | 4 00 | 35 |
| 5 | i F | 36 | " 42 | 30, 32, 40 | 4 00 | 35 |
| 6 | 84 | 32 | " 33 | 30, 36, 40 | 4 00 | 35 |
| 2 3 4 5 6 7 8 9 | 3/2 | 32 | " 31 | 28, 30 | 4 00 | 35 |
| 8 | 94 94 | 32 | " 28 | 24, 3 | 4 00 | 35 |
| 9 | 16 S 16 F | 30 | " 26 | 24, 28, 32 | 4 00 | 35 |
| O | F | 24 | " 24 | 28, 30, 32 | 4 00 | 35 |
| 1 | 18 | 24 | " 21 | 28, 30 | 4 00 | 35 |
| 12 | 32 | 24 | " 17 | 20, 22 | 4 00 | 35 |
| 13 | 10 | 22 | " 12 | 20, 24 | 4 40 | 38 |
| 14 | 4 S | 20 | " 6 | 22, .24 | 4 40 | 38 |
| 15 | . ↓F | 20 | " 5 " 3 | 18, 22, 24 | 4 40 | 38 |
| 16 | 87 | 18 | '' 3 | 16, 20, 24 | 4 40 | 38 |
| 17 | 37 | 18 | " 2 | 16, 20 | ·4 40 | 38 |
| 18 | 12 | 18 | 14 inch. | 16, 20 | 4 40 | 38 |
| 19 | ** | 18 | 1 " | 16, 20 | 4,40 | 38 |
| 30 | 11 F | 16 | 17 " | 18, 20 | 5 30 | . 45 |
| 20 22 24 | 11 | 16 | 3 4 10 4 64 | 18 | 5 30 | 45 |
| 24 | 8 | 16 | 19 " | 14, 18 | 5 30 | |
| 26 28 | 286 644 133 87 16 | 16 | 100 | 14 | 6 30 | |
| 28 | 33 | 14 | 31 ·· | 16 | 6 30 | |
| 30 | 18 | 14 | 11 " | 16 | 6 30 | 53 |

The price per dozen is for orders of not less than one-half dozen of a size. Special sizes and threads made to order at short notice, and subject to special prices.

Machinists' Screw Plates.

| Price | eac | h. |
|---|-------------|------|
| No. 006 inches long, 4 sets Dies and 4 Taps, cutting 1-16th, 64; | | |
| 3-32nds, 56; 7-64ths, 48; \(\frac{1}{8}\), 40 | \$ 3 | 50 |
| No. 00A.—6 inches long, 3 sets Dies and 4 Taps, cutting 4, 36; 6, | | |
| 32; 8, 32; 10, 24 | 3 | 50 |
| No. 0.—71 inches long, 4 sets Dies and 4 Taps, cutting 7-64ths, | | - |
| 48; \(\frac{1}{8}\), 40; 3-16ths, 32; \(\frac{1}{4}\), 24 | 4 | 00 |
| No. 0A.—7½ inches long, 3 sets Dies and 4 Taps, cutting 10, 24; | | •• |
| 12, 24; 14, 20; 16, 18 | 4 | 50 |
| No. 1,—7 inches long, 3 sets Dies and 6 Taps, cutting 4, 40; 6, | | , |
| 40; 4, 36; 6, 36; 8, 32; 10, 32 | 6 | 25 |
| No. 2.—8 inches long, 3 sets Dies and 6 Taps, cutting 6, 32; 8, 32; | ٠. | 20 } |
| 10, 24; 12, 24; 14, 20; 16, 20 | 6 | 25 |
| No. 12.—9 inches long, 4 sets Dies and 4 Taps, cutting 6, 32; 8, | • | |
| 30; 10, 24; 14, 20 | 4 | 50 |
| No. 12A.—9 inches long, 3 sets Dies and 4 Taps, cutting 14, 20; | , | , |
| 16, 18; 18, 18; 20, 16. | 4 | 75 |
| Diamond A Plate, with Tap Wrench. Plate 5 in. long; Tap | * | 10 |
| Wrench 5 in. long; 6 Taps and 6 Dies, cutting 4, 36; 6, 32; | | |
| 8, 32; 10, 24; 12, 24; 14, 20 | 9 (| ΛΛ. |
| Diamond B Plate, with Tap Wrench. Plate 5 in. long; Tap | , | w |
| Wrench 5 in. long; 5 Taps and 5 Dies, cutting 4, 36; 6, 32; | | |
| 8, 32; 10, 24; 12, 24 | 8 | ۵. |
| Diamond C Plate, with Tap Wrench. Plate 5 in. long; Tap | 0 1 | w |
| Wrench 5 in. long; 4 Taps and 4 Dies, cutting 6, 32; 8, 32; | | |
| 10, 24; 12, 24 | - | ^^ |
| 10, 41, 14, 41 | 7 | 00 |
| | , | |

The Diamond Plates are put up in nice wood eses, and are well made in every respect. The Dies are made in one piece, from the best tool steel, and are cut open on one side, to allow for adjustment.

We make both Dies and Taps to American Screw Company's Standard Machine Screws.

Taper Shank Drills.

(List No. 106.)

| | DIAM. | PRICE EACH. | Len'h | Ѕоск'т | Diam. | Pric Each | Len'h | Socket |
|---|--|--|---|----------------|---|--|--|----------------|
| | 14 92 56 12 56 32 6 02 12 72 72 86 02 12 12 12 12 12 12 12 12 12 12 12 12 12 | \$0 60 65 70 75 80 85 90 95 1 00 1 10 1 \$0 1 30 | 61 61 61 61 61 61 61 61 61 61 61 61 61 6 | No. 1, \$1.20 | 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | \$4 65 4 80 5 00 5 20 5 40 5 60 5 80 6 00 6 30 6 60 6 90 7 20 | 141 141 142 142 142 142 15 15 15 15 15 15 15 15 | No. 4, |
| K | 6.8 15116 552 3.4 558 556 753 75 053 | 1 '40 1 50 1 60 1 70 1 85 2 00 2 15 2 30 2 45 2 60 | 83 9 91 91 92 93 95 10 101 102 105 103 | No. 2, \$1.80. | 2 25 1 26 24 25 1 2 25 2 2 25 1 2 25 2 2 25 2 2 25 2 2 2 2 | 7 50 7 80 8 10 8 40 8 60 8 80 9 00 9 20 9 35 9 50 9 65 9 80 | 15 15 15 15 16 16 16 16 | No. 4, \$4.00. |
| | 150 151 151 153 175 153 175 175 175 175 175 | 2 75 2 90 3 00 3 20 3 40 3 60 3 80 4 00 4 20 4 40 4 50 | 10 7 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | No. 3, \$2.50. | $2^{\frac{1}{3}\frac{1}{2}}_{16}$ $2^{\frac{1}{16}}_{18}$ $2^{\frac{3}{16}}_{16}$ $2^{\frac{5}{16}}_{16}$ $2^{\frac{5}{16}}_{16}$ $2^{\frac{5}{16}}_{17}$ $2^{\frac{5}{16}}_{17}$ | 10 20 10 60 11 20 12 00 12 80 13 60 14 40 15 00 15 60 | 16½ 17 17 17 17 17½ 17½ 18 18½ 19 | No. 5, \$7.50. |

Drills of any size or length, with Taper or Straight Shanks, made to order, and to fit any socket desired.

In ordering special Tapers give the length of Shank and diameter at each end of it.

Straight Shank Drills same length as Taper Shanks at Taper Shank prices.

Straight Shank Drills.

(List No. 108.)

| | DIAMETER. | PRICE PER Dozen. | PRICE EACH. | LENGTH IN INCHES. |
|------|--|--|--|---|
| I. | the state of the s | \$1 00 | \$0 09 | 21 |
| 100 | 1 | 1 10 | 10 11 12 | 25 |
| • | 44 | 1 20 | 11 | 28 |
| | 7 | 1 20 1 30 | 12 | 23 |
| | 1 | 1 45 | 1 13 | 2 2 2 2 2 3 3 5 4 5 5 3 3 3 3 4 7 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 |
| | , ĝ | 1 60 | 15 | 31 |
| | | 1 80 | 15 16 | 31 |
| | 11 | 2 00 | 18 | 83. |
| - | 3, | 2 20 | 20 | 31 |
| • | 12 | 2 40 | 18 20 21 23 26 | 35 |
| - | 7. | 2 65 2 90 | 23 | 33 - |
| - | 15 | 2 90 | 26 . | 37 |
| kehi | 1 | 2 00 2 20 2 40 2 65 2 90 3 15 3 40 | - 28 | 4 |
| - | 17 | 3 40 · | 28 30 32 35 37 40 42 45 | 41 |
| - | 9. | 3 65 | 32 | 41 |
| - | 19 | 3 90 | 35 | 48 |
| | 5 T A | 4 20 | 37 | 41 |
| | 21 | b 4 50 | 40 | 46 |
| | 11 | 4 80 | 42 | 44 |
| • | 23 | 5 10 | 45 | 47 |
| | 3 | 5 40 | 48 | 5 |
| | 25 | 5 70 | 50 | 51 |
| | 13 | 6 00 | 53 | 51 |
| 7 | #T | 6 40 | 55 59 63 | 53 |
| | 7. | 6 80 - | 59 | 51 |
| • | 72 | 6 80 · 7 20 | 63 | 5 |
| | 시간 수업 되었기 6 - 12 오늘 이외 마수 집합 하는 지역 기업 소속 가는 이외 입수 수 집 나는 사람 있는 사람 지역 수업 수업 나를 하는 것을 것을 하는 것을 하는 것을 것을 것을 수 없습니다. 것을 것을 수 없습니다. 것을 것을 것을 수 없습니다. 것을 | 7 50 | - 65 | 41 41 41 41 41 41 41 41 41 41 41 41 41 4 |
| | 31 | 7 75 | 67 | 57 |
| | 1 | 8 00 | 70 | 6 |

Straight Shanks. Taper Shank Length.

| DIAMETER. | PRICE EACH. | LENGTH. | DIAMETER. | PRICE EACH. | LENGTH |
|-----------|----------------|--------------------------|-----------|----------------|--------|
| 1 | \$1 00 | 73 | 39 | \$2 60 | 105 |
| 37 | 1 10 | 8 | 18 | 2,75 | 103. |
| 16 | 1 20 | 81 | 31 | 2 90 | 107 |
| 19 | 1 30 | 8 <u>1</u> 8 <u>1</u> | 1 | 3 00 | 5.11 |
| 19 | 1 40 | 83 | 132 | 3 20 | 111 |
| 21 | 1 50 | 9 | 178 | 3 40 | 111 |
| ii | 1 60 | 91 | 139 | 3 60 | 111 |
| 22 | 1 70 | 91 | 11 | 3 80 | 112 |
| 32 | 1 85 | 9½ 9¾ | 132 | 4 00 | iii |
| 20 | 2 00 | 97 | 12 | 4 20 | 12 |
| 18 | 2 15 | 10 | 1.2 | 4 40 | 121 |
| 27 | 2 30 | 101 | ii. | 4 50 | 121 |
| 7 | 2 45 | 101 | | * 00 | 149 |

Bit Stock Drills for Metal or Wood.

(List No. 114.)

| Diameter. | Price per Dozen. | Price Each. | Diameter. | Price per Dozen. | Price Each. |
|------------|---------------------|----------------|-----------|---------------------|----------------|
| 3 2 | \$1 50 | \$0 14 | 14 | \$ 8 80 | \$ 0 75 |
| 3 2 | 1 65 | 16 | 15 | 9 60 | 82 |
| . 32 | 2 10 | 20 | 16 | 10 30 | 8 |
| | 2 60 | 24 | 17 | 11 00 | 92 |
| 32 | 3 10 | 29 | . 92 | 1, | 1 20 |
| 3 2 3 2 | 3 60 | 33 | , a | | 1 35 |
| 32 | 4 10 | 38 | i ii | | 1 50 |
| 32 | 4 70 | 43 | 3 | | 1 65 |
| 10 | 5 40 | 48 | 13 | | 1 80 |
| 11 | 6 30 | 54 | 1 2 | 1 | 1 95 |
| 32 | 7 20 | 62 | 18 | | 2 15 |
| 13 | 8:00 | 68 | 1 1 | | 2 35 |

These Drills are made of the finest Steel, and are tempered to drill steel, iron or wood. They will bore wood without splitting it.

Straight Shank Wachine Bits, for Wood.

(List No. 122.)

| Diamet'r | Price Each: | Length. | Diamet'r | Price Each. | Length. |
|---|--|---|--|--|--|
| 1 8 6 7 7 7 1 4 0 2 7 6 6 1 1 2 2 2 5 6 6 1 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 1 2 2 2 5 6 6 6 6 1 2 2 2 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 | \$0 20 25 30 35 40 45 50 55 65 | 3 in. 31 '' 31 '' 32 '' 4 '' 41 '' 42 '' 5 '' | 18 2 7 8 1 5 2 1 2 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | \$0 70 75 80 85 95 1 00 1 15 1 35 1 65 | 51 in 51 · · · · · · · · · · · · · · · · · · · |

Price per set, with Bit Point, $\frac{1}{3}$ in to $\frac{1}{2}$ in mounted, varying by 32nds, \$7.00.

Square Shank Ratchet Drills.

(List No. 111.)

| Ď | iamet'r | Price. | Length. | Diamet'r | Price. | Length. |
|---|---|--------------|--------------|---|--------------|---------|
| | 1 | \$1 00 | 5 in. | 18 | \$1 35 | 61 in. |
| | 32 | 1 05 | 5 " | 96 118 14 17 17 17 16 | 1 40 1 45 | 61 " |
| | 5 1 1 2 2 2 3 2 3 2 7 6 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 1 10 1 15 | 5 " | 18 | 1 45 | 61 " |
| - | 32 | 1. 20 | 6 "' | 18 | 1 75 | 7 " |
| | 13 | 1 25 | 61 " | 7 | 2 05 | 71 " |
| | 1 | 1 25 | 61 " | 14 | 2 30 | 8 " |
| | 15 | 1 30 | 61 " | 120 | 2 55 | 9 " |
| | 3 2 1 | 1 30 | 61 " 61 " | 13 | 3 10 | 9 " |

Shanks $\frac{5}{8}$ in. by $\frac{3}{8}$ in. by $1\frac{1}{2}$ in. long, and $\frac{3}{4}$ in. by $\frac{1}{2}$ in. by $1\frac{3}{4}$ in. long.

Stubs' Steel Wire Gauge Drills.

| Nos. by Gauge | Price per Doz. | Price each. | Length in in |
|---------------|----------------|----------------|--------------|
| 1 to 5 | \$2 35 | \$ 0 22 | 4 |
| 6 to 10 | 2 25 | 21 | - 311 |
| 11 to 15 | 2 10 | 20 | 35 |
| 16 to 20 | 1 95 | 19 | 31 |
| 21 to 25 | 1 75 | 17 | 3,7 |
| 26 to 30 | 1 55 | 15 | 218 |
| 31 to 35 | 1 40 | 14 | 24 |
| '36 to 40 | 1 25 | 12 | 278 |
| '41 to 45 | 1 10 | 10 | 21 |
| 46 to 50 | 95 | 09 | 2,5 |
| 51 to 65 | 95 | 09 | 14 |

Engineers' Brass Goods—(Best Steam Metal).

| 1 | 69 | - | | , | , | 4 | 4 | 29 4 | | _ | • | | , | • | • | |
|---|--------|----------|-----|--------|--------|---------|-------------|------------|--------|---|-------|----------|-----------------------|---|-------------|----|
| , | | ن ا | 1 0 | | | 0 | 0 | 69 | 66 | | . o | 60 | . ee | | 60 | ان |
| Valves acrewed | each 0 | 009 | 22 | 8 | 1 35 1 | 8 | 200 | က | 30 | 8 | 1 75 | 91 | 8 | 8 | \$; | 8 |
| Amelo Valvos flanced | 3 | | : | : | : | 8 | 8 | 0 | 014 | | | 8 | 8 | | g | 8 |
| Check Valves horzontal, angle or vertical | | 200 | 000 | 0 85 1 | 1 15 | 1 55 | 8 | <u>ش</u> . | 101 | | _ | = | 88 | : | : | : |
| wha | ; | | 8 | 1 15 | 8 | 33 | 3 60 | 7 | 2 | | | 3 | 3 | • | : | : |
| Ston Colts artra heavy | ; ; | : | : | 1 55 | 8 | 8 | 200 | - | 5 | | _ | 3 | 3 | : | : | : |
| Gira Choke three way | 3 | - | : | | | 8 | 6 75 | G | 014 | | | 36 | 91 | : | : | : |
| . 4 (| 3 | - | 8 | 8 | 2 70 | 8 | 4 45 | 20 | 9 | | | 3 | 12 | | : | : |
| Com Tolling | " | - | - | S | | ය | 3 2 3 | 9 | 2 | | _ | 77 | 3 | : | : | : |
| Cross variety flances | ** | | | : | - | - | m | 2 | 012 | <u>8</u> | _ | g | 8 | : | : | : |
| D. J. L. Volras wood wheel | ,, | | | 1 25 | 1 80 | 2 40 | ~ | 4 | | ::::::::::::::::::::::::::::::::::::::: | : | : | <u>:</u> | : | : | : |
| 1 | * | _ | | 1 75 | 2 30 | 3 00 | - | 0 | | : | : | : | <u>:</u> | ÷ | : | : |
| 4 | 3 | | | | 200 | 2 20 | m | 4 | 0 | 8 | : | : | | : | : | : |
| Compiled Globe and Check Valves | 3 | | | 3 50 | 4 15 | 2 20 | : | : | -: | : | : | : | ÷ | : | ; | ì |
| Combined Cock and Check varying | 3 | | | | 3 50 | 200 | | 8 | 0 12 | 8 | 8 | ೫ | 8 | : | : | : |
| 90 | 3 | <u>:</u> | | | 75 | 2 35 | ~ | 4 5 | 90 | 8 | æ | 15 | <u>ස</u> | : | : | : |
| Foot valves, with strainer | : | ÷ | | 2 703 | 30 | 30 4 40 | 5 10 | 5 | 011 | 8 | 8 8 | 8 | 8 | | : | : |
| Whistle Valves. | 3 | | | | | 1200 | 2 | 8 | 8 | 8 | | : | ÷ | : | : | : |
| Tr. lace mith con | 3 | | | - | | 2 30 | m | 52 | 8 | 8 | 16 00 | 24 | 8 | · | : | : |
| Hope valves, with coupling | ¥ | | | | | 3 25 | | | 6 | 8 | • | • | : | : | : | : |
| Expansion Journal | * | | | 0 30 0 | 0 35 | 20 | _ | 12 | 2 | ജ | 8 | œ | <u>¥</u> | : | : | : |
| nose Couplings | 3 | _ | | : | 8 | - | : | : | | | | : | $\frac{\cdot}{\cdot}$ | : | : | : |
| Hose Distinction, with coor. | 3 | | : | 0 13 | 0 13 | 17 | 0 21 | 0 | S S | * | 20 | : | | : | Ġ | : |
| Hose Wire Fasteners. | doz. | <u>:</u> | : | 940 | 8 | 8 | : | | : | -: | :: | : | $\frac{\cdot}{\cdot}$ | : | : | : |
| | each | ÷ | : | 9 | 0 15 | Š | 200 | 0 | 1 92 | 2 | 3 | <u>:</u> | ÷ | : | Ė | : |

Engineers' Brass Goods-Continued.

Roberts' Patent Double Seated Improved Register Gauge Cock.

| No. 1. Screwed, 1 inch | ٠. | \$0 90 1 00 |
|------------------------|----|----------------|
|------------------------|----|----------------|

Cocks and Gauges.

| INCH 1 1 | Ħ | 1 | 34 |
|--|---------|--------------|-----------|
| der Cocks, T handle, straight \$0 65 0 80 0 80 1 00 1 00 1 00 1 00 | \$ 0 80 | \$ 1 40 | |
| " lever " 0 80 0 80 | 0 90 | 1 25 | |
| " " bent nose 1 00 1 00 | 1 1 25 | 2 15 | |
| ider Cocks, lever handle, bent | 1 | | |
| se, screwed both ends 1 05 1 10 | 1 30 | 2~25 | |
| pression Gauge Cocks, wood | | | |
| ndle, babbit seat. | . 1 50 | 1 75 | \$2 00 |
| pression Gauge Cocks, with stuff- | | | |
| box, wood handle, babbit seat | . 1 70 | 1 80 | 2.00 |
| er Gauge, glass and rubbers, 2 | | | |
| ards. | . 3 20 | 3 20 | |
| | | 3 20 4 00 | |
| " 4 quards complete | | | |
| lighed hody | 10 00 | 10 00 | |
| er Gauge, complete, 3 guards | | | 4 00 4 00 |

Gauge Glasses, § inch, each, 30c.

Steam Whistles (with Valves).

Dia. of Bell, $1\frac{1}{4}$, $1\frac{1}{4}$, 2, $2\frac{1}{4}$, 3, $3\frac{1}{4}$, 4, 5, 6. For Pipe, $\frac{1}{4}$, $\frac{1}{4}$,

Plain Oil Cups (Screwed Covers).

Dia. Shell, \$\frac{1}{4}\$, \$\frac{1}{2}\$, \$1\$, \$1\frac{1}{4}\$, \$1\frac{1}{2}\$, \$1\frac{1}{2}\$, \$1\frac{1}{4}\$, \$2\$, \$2\frac{1}{4}\$, \$2\$, \$3\$. Screwed for Pipe, \$\frac{1}{3}\$, \$\frac{1}{4}\$, \$\frac{1}{4

Glass Oil Cups (with Guards).

Engineers' Iron Body Goods.

| En | gine | ers' | Ir | 'On | В | od | ý | G | 00 | ds | • |
|----------------|------|--|-------------------|--------------|-----------------------|--|-------------------------------|-------------------|----------|--|-------------|
| 1 | ಲೆ | : :: | 88 | 8 | 8 | 88 | ۶. | 3 : | : | : : | 0 |
| 2 | * | | 85 | 33 | 8 | 82 | :8 | 3 : | i | | |
| - 1 | ં | : : | 88 | 8 | 8 | 88 | 88 | 3 : | : | : : | 8 |
| 9 | 69 | | 4 ′2 | 8 | 8 | æ 58 | 3: | \$ | i | 1 | 12 |
| | ಲೆ | :: | 88 | 8 | 8 | 88 | 88 | 3 | : | | 8 |
| 2 | 69 | | 88 | 2 | 8 | 83 | 8 | \$ | : | | 2 |
| | ပံ | : : | 88 | 8 | ŝ | 82 | 88 | 3 | : | | 8 |
| 44 | 69 | | 88 8 | | 24 | 88 | 83 | 8 | | : : | ខ |
| | ပံ | | 88 | 8 | 8 | 88 | 8 | 38 | 88 | 38 | 8 |
| 4 | 200 | WA. | 88 | 35 | 18 | 2,28 | 18 | 22 | 8 | 8 8 | œ |
| 33 | | | 82 | | | 85 | | | | | |
| رب | 99 | 88 | 99 | 1 | 14 | នន | 12 | 25 | N | 38 | 9 |
| ಣ | ပ် | 222 | 20.5 | 35 | 75 | 88 | 2 | 36 | 8 | 88 | 8 |
| | . o | 010 | 017 | 240 | - 2 | 86 18 18 18 18 18 18 18 18 18 18 18 18 18 | 0 | 00 | 6 | 010 | 0 |
| $2\frac{1}{2}$ | | 920 | 85 | 9 | 2 2 | 120 | 0 0 | ⊙ (α | 000 | 80 | 40 |
| | | 38 | 25 | 3 75 | 8 | 8 | 8 | 82 | 2 | 95 | 123 |
| 83 | 40 | | | ္တ | 2 00 | 9 | 6 | 54 | 10 | 10 | · 63 |
| 15 | ပ် | 33 | : | | : | 4 75 | : : | :8 | 3 | 8 8 | 28 |
| | en | 8 4 | ÷ | | -: | 4 | : : | · K | 3 | G 18 | 52 |
| -11 | * | 20 00 | : | | : | : | :: | .6 | | 93 W | 7 |
| Size 1 | 1 | Screwed without Yoke. 2 503 Flanged " 3 254 | Screwed with Yoke | Screwed | ged | Safety Valves, Cross and Angle, Screwed 4 75 | Back Pressure Valves, Screwed | 9 98 9 00 | : .: | Three Way Cock, Screwed 2 40 3 35 4 85 | _ |
| Siz | i | Yo | oke | . Fe | lan | Cre | | | | | |
| | ! | out | Ă, | | <u> </u> | SE | 4 | ď | : : | : | - |
| | | ţţ. | É, | | v | 180, | ewe | Flanged | | | est. |
| , | ! | ∌ | 701 | Horizontal | angle and vertical | A, | 5 | F | | हुं हु | _ |
| | i | B 6 | M O | ₽.Ž. | gle | nd | 80 | | : : | New Y | 1 |
| | ! | lan | 213 | Horizo | S. A | 88.3 | We | 3 | 3 | 20 5 | i d |
| | | N. | 100 | 5 | ~ | 2 | Va | | Flanged. | Ą | 2 |
| | | 8 | | 88 | 88 | es, | ire | 9 | 15 | 3 | O. |
| | | Globe Valves | T : | Angle Valves | Check Valves | alv | 1889 | Star Cools Second | 9 | 87 | Root Valves |
| | - | >_ | and | | · · | 2 | A | : 2 | 3 | >, | 5 |
| | | e G | - | 1816 | 8 | fet | ck | - | 3, | 2 | + |
| | | | | | | | | | | | |

BRASS MOUNTED.

Detroit Cylinder Lubricators.

AUTOMATIC SIGHT FEED.

Size 1 prot, brass, \$22; plated, \$25. Size 1 quart, brass, \$45; plated, \$50. " 1 prot, " \$30; " \$35. " 2 " " \$60; " \$65.

Bailey Cylinder Lubricators.

| 4 | For Engine | Pr | ice. | G: CO |
|----------|--------------------|------------------------|-----------------------------|----------------------------|
| No. | or Horse Power. | Without Sight Feed. | With Sight Feed | Size of Shank Threaded. |
| 1 | 4 8 | . \$2 75 3 25 | \$5 ['] 00 5 50 | 3 in. |
| 3 4 | 12 15 | 3 75 4 50 | 6 00 7 00 | in. |
| 5 | 25 40 | 5 50 6 50 | 8 00 ' 9 00 | 2 24. |
| . 7 8 | 70 109 | 8 50 10 50 | 11 00 13 00 | 3 in. |

For nickel plating add 20 per cent. For finishing partly in the rough, deduct 15c. to 25c. each, according to size.

Steam Gauges.

| | · | • | Size of | Dial | . 5 | | 5 | ļ, n | 6 | | 6 | 1 | .8 | 1 |
|------------------------------|------|------|--------------------------|------|-----|----------|----|----------|----------|----------|------------------------|----------|----------|----------|
| Japanned Bronzed Brass | . ". | N, 1 | hed Ring P. " ring | | 8 | 50 25 | 10 | 50 25 | 10 12 | 60 75 | \$14 14 16 18 | 75 75 | 21 25 | 75 00 |

Malleable Iron Fittings.

(Classified and sold by weight as under.)

QLASS A.

Price 30 cts. per pound. Elbows $\frac{1}{5}$, $\frac{1}{5}$ x $\frac{1}{5}$, $\frac{3}{5}$ x $\frac{1}{5}$. Tees, $\frac{1}{5}$, $\frac{1}{5}$ x $\frac{1}{5}$, $\frac{1}{5}$ x $\frac{1}{5}$. Reducing Couplings, $\frac{1}{5}$ x $\frac{1}{5}$, $\frac{3}{5}$ x $\frac{1}{5}$. Couplings, R. H., $\frac{1}{5}$

. CLASS B.

Price 18 cts. per pound.

Elbows and Tees, from ½ to ¾ inclusive.

Street Elbows, all sizes.

Elbows, side outlets, all sizes.

Crosses, all sizes.

Drop L's and Drop Tees, all sizes.

Caps, Plugs and Lock-nuts, all sizes.

CLASS B.

(Continued.)
Reducing Couplings, all sizes.
Extension Pieces.
Right and Left Fittings, all sizes.
Right Hand Couplings, 1 to 1.
Waste Nuts, Chandelier Hooks.
Return Bends, all sizes.
Straps, not tinned, all sizes.

CLASS C.

Price 16 cts, per pound.

Elbows and Tees 1 x 2 and larger.

Such Fittings, in this class, as have one or more outlets smaller than 2 will be charged in Class B.

Weber's Patent Straightway Valves.



DOUBLE GATE.

Solid Valves and Solid Seats of Brass or Iron.

Composition Steam and Water Valves.

SCREW TOP.

DOUBLE GATE.

BEST STEAM METAL.

'OLASS' A.

| Diameter of Opening Face to Face, Screw Ends Flange '' Diameter of Flanges | $2\frac{1}{8}$ $2\frac{9}{16}$ | 2# 3 | 1 35 37 37 | 11 311 318 | 1½ 4½ 4½ 4,8 | 2 44 518 | 21 618 52 | 3 68 7 | 3½ 8¾ 8¼ | 4 81 87 | 5 |
|---|--------------------------------|---------|---------------------|------------------|-----------------------|----------------|-----------------|--------------|----------------|---------------|---|
| Diameter of Flanges | 3 | 3 | 4 | 412 | 5 | 91.0 | 7 | 7 | 8 <u>1</u> | 9 | |

PRICE LIST.

| Screw End Flange End . | 2 | c. 30 50 | \$ 1 3 | 75 00 | \$ 2 4 | c. 25 | \$ 3 5 | c. 25 00 | \$ 4 7 | c. 25 50 | \$ 6 10 | c. 25 00 | \$ 11 16 | d. 50 00 | \$ 16 20 | e. 00 00 | \$ 32 40 | c. 00 00 | \$ 40 48 | c. 00 |
|-------------------------------------|---|----------------|--------|----------|--------|----------|--------------|----------------|--------------|----------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|
| Sliding Stem and Lever, extra | 1 | 00 | ì | 20 | 1 | 40 | 1 | 60 | 1 | 80 | 2 | 00 | 2 | 25 | 2 | 50 | 2 | 75 | 3 | 00 |

A. R. WILLIAMS,

Weber's Straightway Valves .- Continued.

IRON BODY. FLANGE TOP. BEST STEAM METAL.

OLASS C.

| Diameter of Opening inches | 2 <u>1</u> | 3 | 31/2 | 4 | 5 | 6 | 7 | 8 | 10 | 12 | 14 | 1 6 | 18 | 20 | 24 |
|----------------------------|---------------------|---------|------------------------------|----------------|----------------------|-----------------|-----------|----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------|----------|-----------------------|
| Ends | 6 ğ | 7‡ | 81 | 9 8 | 98 | 10 7 | 111 | 12 | 1. | | | ٠. | | ٠. | |
| Ends | 6 ∄ 7 | 7± 7 | 8 1 8 <u>1</u> | 9¥ 9 | 9 § 10 | 107 11* | 11½ 12 | 12 13 | 13 § 16 | 14 § 18 | 15 7 21 | 16 3 23 | 18# 25 | 21 27 | 23 ₁ 31 |

PRICE LIST.

| Screw Ends Flange Ends Sliding stem and | \$10 10 | 00 00 | \$12 12 | 00 | \$16 16 | 00 00 | \$18 18 | 00 00 | \$25 24 | 00 00 | \$32 31 | 00 00 | \$41 (36 | 00 00 | \$50 45 | 0 |
|---|------------|----------|------------|----|------------|----------|------------|----------|------------|----------|------------|----------|-------------|----------|------------|---|
| Lever extra | 2 | 25 | 2 | 50 | 2 | 75 | 3 | 00 | | • • • | • • • | • | | | ···· | |

Blow Off Valves.

Best Steam 1; 1; 2 2; 3 Metal\$4 50 \$5 75 \$8 25 \$14 25 \$19 75

Iron Body, Brass 2 21 3 3 31 4 Mounted...\$8 36 \$12 30 \$14 75 \$20 00 \$22 50

Will quote prices for larger sizes on application.

N. B.—Send for special circular and quotations on Water Gates and Class B Screw Top Iron Body Valves from 2 in. to 4 in.



Standard List of Malleable Iron Fittings.

| Unions \$0 15 \$0 18 \$0 20 \$0 28 \$0 34 \$0 46 \$0 6 50 \$0 80 \$0\$ Bushings 0 05 0 05 0 05 0 06 0 07 0 09 0 13 0 17 0 27 0 Pluge 0 03 0 03 0 04 0 05 0 06 0 10 0 14 0 17 0 27 0 Nipples Shoulder 0 05 0 06 0 07 0 09 0 10 0 14 0 17 0 25 0 " Close 0 07 0 08 0 10 0 12 0 15 0 20 0 28 0 39 0 " R. & L. 0 10 0 12 0 15 0 15 0 20 0 25 0 35 0 Stop Coaks 0 07 0 80 0 10 0 12 0 15 0 15 0 20 0 25 0 35 0 Tlanges 0 07 0 80 0 20 0 28 0 36 0 50 0 65 0 90 1 | | 91 | DIS. | -44 | * 2000 | -409 | 2044 | | - | 17 | | 42, | 67 | | 23 | | 67 | 63 | र्क | | 4 | | 1Q. | | |
|---|------------|----------|------|--------|--------|----------|------|----|------|-----------|------|------|------|----|------|-------|------|----------------|------|----|------|--------------|-----|----|-------|
| Shoulder. 0 05 0 05 0 06 0 07 0 05 0 06 0 07 0 05 0 06 0 07 0 05 0 06 0 07 0 05 0 06 0 07 0 05 0 0 05 0 0 05 0 0 05 0 0 05 0 0 05 0 0 05 0 | nions | | | \$0 15 | \$0 18 | 96 96 | 8 | 80 | 0.34 | \$0 4 | 9 | 8 | 2 | 9 | 1 2 | - 66· | 10 | 50 \$2 10 \$ 3 | 8 | 4 | 8 | <u> </u> | : | : | |
| Shoulder. 0 03 0 03 0 04 0 05 Long. 0 07 0 08 0 10 0 12 Close. 0 07 0 08 0 10 0 12 R. & L. 0 10 0 10 0 12 0 15 cks. 0 0 0 0 0 0 0 0 0 0 0 0 0 | ushings | : | | 0 05 | 0 | | 0 | 20 | 0 0 | 0 13 | 8 | 0 17 | 0 27 | 12 | 0 42 | 0 | 90 | • | 8 | | 8 | 1 00 \$ 1 85 | ₩. | 69 | 몺 |
| 0 05 0 06 0 07 0 09 0 07 0 08 0 10 0 12 0 07 0 08 0 10 0 12 0 10 0 10 0 12 0 15 0 0 0 75 0 80 0 90 | lugs | | | 0.83 | | 9 | 0 | 8 | 90 | 0 10 | - | 0 13 | 0 20 | 8 | 0 35 | -0 | 0 22 | | 0 75 | | 88 | - | 22 | | 2 40 |
| Close 0 07 0 08 0 10 0 12 Close 0 07 0 08 0 10 0 12 R. & L 0 10 0 10 0 12 0 15 ks 0 75 0 80 0 90 | ipples-Sl | oulder . | | 0 00 | 0 | 0 | 0 | 8 | 0 10 | 0 14 | 4. | 0 17 | 0 25 | | 99 0 | 0 9 | 72 | | :8 | | 1 25 | 63 | 8 | 83 | 22 |
| Close 0 07 0 08 0 10 0 12 R. & L 0 10 0 10 0 12 0 15 ks 0 75 0 80 0 90 | | ong | | 0 07 | | 0 | | | 0 15 | 0 | 22 | 88 0 | 0 | 39 | 0 77 | 7 | 8 | 1 | 9 | | 2 00 | က | 8 | | 2 00 |
| R. & L | | 08e | | 0 0 | 0 | 0 10 | 0 | 12 | 0 15 | 0 20 | 0 | 0 25 | 0 35 | 19 | 0 20 | 0 | 8 | | 1 25 | | 28 | 63 | 28 | | 3 50 |
| ks | | & L | | | 0 | 0 | | 12 | 0 18 | 0 18 0 24 | | 0 35 | 0 20 | | 1 00 | 0.1 | 13 | - | . 8 | 63 | 9 | 4 | 8 | | 5 50 |
| 0 20 0 28 0 | top Cocks. | : | | , | 0 75 | 0 | 0 | | 1 25 | - | 20 | 2 00 | 63 | 8 | 4 50 | 9 0 | 20 | 12 | 8 | 16 | 8 | æ | 8 | | 45.00 |
| | langes | 1 | | : | : | 0 | 0 | | 0 36 | 0 20 | | 0 65 | 0 | 8 | 1 40 | 2 | 8 | 81 | 75 | | 3 50 | 10 | 8 | | 9 |
| Flanged Unions 0 75 0 80 1 0 | langed Un | ions | | | : | 0 78 | 0 | 8 | 1 00 | 1 00 1 25 | - 10 | 1 50 | 1 75 | 10 | 2 00 | 2 | 75 | က | 28 | | 4 20 | 9 | 8 | 2 | 몺 |

Cast Iron Fittings.

| INC | ж | 4 | ŀ | | 8 | | $\frac{1}{2}$ | | 34 | | | 1 | | 1 | ŧ | 1 | 1 | : | 2 |
|--|-----|-----|----------|----|-------|---|----------------|-----|-----|-----|---------|--------------|-----|----|-------|-----|----------|-----|------------|
| | - | 8 | c. | 8 | c. | 8 | C. | 9 | ; , | c. | 8 | C. | 8 | | C. | 8 | c. | 8 | c. |
| Elbows and reducing | | • | | - | | | | | | | | • | 1 | | 1 | • | | | - |
| elbowseac | | ٠. | ٠. | | | | 06 | | | | | 11 | | 1 | | 0 3 | | 0 , | |
| atoows, right and lett, | 6 | • • | ٠. | | ٠., | | 07 | | |) | | | | | | | 264 | | |
| 2100W8, 40 | | ٠. | ٠. | | ٠., | O | 10 08 | V U | 18 | 2 | | | 0 | | | Ŏ : | | 0 | |
| Tees and reducing tees (' Prosses and reducing | | •• | • • | | • • • | U | vo | U | 12 | ۱ ٔ | U | 16 | 0 | Z | Z | 0 : | or | 0 | 40 |
| crosses | ۱، | | | | | | | | | 1 | Λ. | 28 | 0 | Q | ۵ | 0 ! | 54 | 0 | 76 |
| Return hends close ' | 66 | ••• | •• | 1. | • • • | | • • • | | ii | | | | | | | ŏ | | ŏ | |
| " open | ۱ ، | •• | • • | | · : : | 1 | • • • • • • | | 19 | | | 26° | ŏ | | | ŏ | | ĭ | |
| Japs " | " | | | ١. | | | | . | | | | | 1. | | . | | | | ٠. |
| Plugs ' | | 0 | Q3 | 0 | 03 | 0 | 04 | 0 | 05 | 5 | 0 | 06 | 0 | 0 | 8 | 0 | 11 | 0 | 16 |
| Reducing couplings | | ٠. | ٠. | ١. | | | | . | | . | ٠. | | | ٠. | | | | | |
| tange unious | | ٠. | | | ٠., | 0 | 55 | 0 | 60 |) | 0 | 70 | 0 | 8 | 0 | 1 (| 00 | 1 | 20 |
| | | | | | 05 | _ | 00 | | | . | | •• | | _ | | | | | |
| bushings ' | | • • | •• | U | UO | U | 06 | 10 | 0, | | U | 0 8 | 0 | 1 | U | 0 : | 14 | 0 | 20 |
| 1NC | н | 2 | 1/2 | | 3 | | 31/2 | 4 | | 4 | 1 2 | 5 | | | 6 | | 7 | | 8 |
| | - | 9 | _ | - | _ | 9 | c. | • | 0 | • | _ | | - | - | _ | | С. | • | |
| Elbows and reducing | - [| Ψ | ٠. | w | ٠. | W | ٠. | ₩ | 0. | Ψ | ٥. | 4 | ٠. | Φ. | | 6 | C. | Ф | |
| elbowseac | ch | 0 | 60 | 0 | 90 | 1 | 20 | 1 | 60 | 2 | 50 | 3 (| 00 | 4 | 20 | 7 | 00 | 10 | 0 |
| Elbows, right and left. ' | • | | | | | | | | | | | | | | | ١., | | | |
| 2100WB, 40 | | | | | | | | | | | | | | | | | 00 | | |
| toos and reducing toes | " | 0 | 90 | 1 | 35 | 1 | 80 | 2 | 40 | 3 | 75 | 4 | 50 | 6 | 30 | 10 | 00 | 15 | 0 |
| Crosses and reducing | | | | ار | ٠. | | | | | _ | - 4 | | | _ | | L. | | | |
| CIUBBOB | - 1 | 1 | 50 | Z | 24 | 3 | 00 | 4 | 00 | 5 | 00 | 6 (| 00 | 8 | 40 | 14 | 00 | 20 | 0 |
| verurn bends, crose | ! | 1 | ρū | 2 | 20 | 3 | 75 | Đ | 00 | | :: | | • • | ٠. | • • • | ١ | • • | ١٠ | |
| Jone open | - 1 | 1 | 70 50 | Z | 90 | 4 | 25 | 9 | 10 | 8 | W | : . | -: | ċ | • | | | ٠, | |
| /apa | . / | 0 | 95 | Ž | 45 | Ž | 85 60 | Ÿ | 10 | 1 | 40 M | 1 | 3V | Z | 30 | | 10 75 | | 1 3 5 5 |
| Reducing couplings | 1 | | | | 00 | | | | 00 | | | | | | | | . 00 | | |
| | | | | | | | 30 | | | | | | | | | | 00 | | |
| | | | J | 1- | 00 | - | 00 | - | 30 | U | v | 0 | vv | U | 00 | 1.0 | | | , 0 |
| | | | | | | | | | - 1 | | | 1 | | | | 1.0 | | | |

Branch Tees.

Number of Outlets, 1 in. Outlets, 2½ centre to centre.....

2 3 4 5 6 7 8 80.75 \$0.90 \$1.05 \$1.20 \$1.50 \$2.20 \$2.5

Hook Plates.

Wrought Iron Pipe for Gas, Steam and Water.

TABLE OF STANDARD DIMENSIONS AND SIZES.

| Nominai Inside Diameter in Inches. | Weight per Foot in ibs. | Actual Inside Diameter in Inches. | Actual Outside Diameter in Inches. | Number of threads to Inch of Screw. | Price per foot. |
|---|-------------------------------|---|--|--|-----------------|
| i i | .24 | .27 | .405 | 27 | \$0 06 |
| . 1 | .42 | .36 | .54 | 18 | 0 06 |
| 쁄 | .56 | .49 | .675 | · 18 | 0 07 |
| 1/2 | .85 | .62 | .84 | 14 | 0 081 |
| 3 | 1.12 | .82 | 1.05 | 14 | 0 12 |
| 1 | 1.67 | 1,04 | 1.315 | 111 | 0 17 |
| 11 . | 2.25 | 1.38 | 1.66 | $11\frac{1}{2}$ | 0 22 |
| 11/2 | 2.69 | 1.61 | 1.90 | 1112 | 0 28 |
| 2 | 3,66 | 2.06 | 2.375 | 1112 | 0 41 |
| 21 | 5.77 | 2.46 | 2.875 | 8 | 0 75 |
| 3 | 7.54 | 3.06 | 3.5 | . 8 | 1 10 |
| 31/2 | 9.05 | 3.54 | 4.0 | 8 | 1 38 |
| 4 | 10.72 | 4.02 | 4.5 | 8 | 1 75 |
| 41/2 | 12.49 | 4.50 | 5.0 | . 8 | 2 25 |
| 5 | 14.56 | 5.04 | 5.563 | 8 | 2 75 |
| 6 | 18.76 | 6.06 | 6.625 | 8 | 3 50 |
| 7 | 23.41 | 7.02 | 7.625 | 8 | 4 75 |
| 8 | 28.34 | 7.98 | 8,625 | 8 | 6 50 |

Pipe cut and screwed to specification.

Ewart's Patent Drive Chain.

Price List of Chain.

| No. | Links per foot | Working strain. | Price per foot. | Equiva- ient in belting | No. | Links per foot | Working strain. | Price per foot, | Equiva- lent in beiting. |
|-----|----------------------|--------------------|-----------------------|-------------------------------|------|----------------------|--------------------|-----------------------|--------------------------------|
| 25 | 13.3 | 75 lb | \$0 13 | in. | 67 | 5.16 | 700 lbs | \$ Q 30 | 8 in. |
| 32 | 10.5 | 150 " | 0 13 | 11 " | 73 | 3.7 | 800 4 | 0 40 | 9 " |
| 33 | 8.6 | 150 " | 0 12 | 2 " | 75 | 4.5 | 800 " | 0 35 | 9 " |
| 34 | 8.6 | 175 " | 0 13 | 2 " | 77 | 5.16 | 800 " | 0 35 | 8 " |
| 35 | 7.4 | 200 " | 0 14 | 2 , " | 78 | 4.5 | 1000 " | 0 40 | 10 " |
| 42 | 8.75 | 350 " | 0 16 | 4 " | 85 | 3. | 1400 " | 0 50 | 10 ." |
| 45 | 7.4 | 400 " | 0 16 | 4 " | 88 | 4.5 | 1400 " | 0 50 | 10 " |
| 48 | 6. | 400 " | 0 17 | 5 " | 95 | 3. | 1500 " | 0 60 | 12 " |
| 49 | 7.4 | 4 50 " | 0 20 | 5 " | 103 | 4. | 1800 " | 0 75 | 14 " |
| 52 | 8. | 600 " | 0 25 | 6 " | 105 | 2. | 1700 " | 0 70 | 12 " |
| 53 | 8. | 650 " | 0 26 | 6 " | 108 | 2.5 | 1800 " | 0 80 | 14 " |
| 55 | 7.4 | 650 " | 0 22 | 6 " | 114 | 3.66 | 2000 " | 1 10 | 14 " |
| 57 | 5.16 | 650 ' | 0 24 | 6 " | 124 | 3. | 2500 " | 1 30 | 18 " |
| 62 | 7.25 | 700 | 0 30 | 7 " | 146 | 2. | 2800 " | 1 40 | 20 " |
| 63 | 6. | 700 | 0 30 | 7 " | 600 | 2. | 7000 " | 1 00 | 24 " |
| 64 | 6. | 700 ' | 0 30 | 7 " | 1050 | 1.2 | 12000 '' | 1 30 | 36 " |
| 65 | 5.66 | 700 ' | 0 30 | 7 " | 1075 | 1.2 | 16000 " | 1 40 | 40 " |
| 66 | 6. | .700 ' | 0 30 | 8 " | 1200 | 1. | 7000 " | 0 90 | 24 " |

All chains are tested at two and one-half times the working strains given above.

Run chain with open side of coupling out, and back of coupling hook against driving side of wheel sprocket.

Ewart's Drive Chain.—Continued. ATTACHMENT PRICE LIST PER FOOT.

(See above list for number of links per foot.)

| No. Chain. | The only Attachments that are made on each size chain are given below. | Foot Price. |
|---------------|--|----------------|
| 25 | A2, A3, C1, E1, G1, K1, K5, K6, S1 | \$0 17 |
| 33 | A1, D3, E1, 13, K1, K3, K5, K6, M1, S1 | 0 15 |
| 35 | A1, A2, A10, C1, K1, S1 | 0 18 |
| 42 | A1, C1, D2, K3, K5, M2, S1 | 0 20 |
| 45 | A1, 2, 3, 10, C1, D1, D3, D5, £1, G1 | 0 20 |
| | H1, I3, K1, K3, K5, M1, S1 | 0 31 |
| 52 - 1 | A1, D2, E1, K5 | 0 32 |
| 55 | A1, C1, K1, S1 | 0 27 |
| 57 | A1, D3, D5, E1, F2, H1, K1, S2 | 0 30 |
| 67 | A1, E1, FF, F2, H1, K1, S2 | 0 37 |
| 73 | K1, K8, S2 | 0 50 |
| 75 | E1, H1, K1 | 0 44 |
| 77 | E1, F2, G1, H1, K1, K8, R1, S2 | 0 44 |
| 78 | A3, E1, F2, F4, G1, H1, K1, S2 | 0 50 |
| . 83 | D5, E1, M3 | 0 56 |
| 85 | E2, F1, F2, FF, H1, K2, K4, K7, S2 and Hod link. | 0 62 |
| 88 | F2, G1, K1, S2 | 0 69 |
| 95 | F2, H2, K2 | 0 75 |
| 103 | A1, F2, H1, K1, M2 | 0 94 |
| 105 | F1, H1, K4, M3 | 0 87 |
| 109 | F2, F3, FF, G1, K2, Hod link | 1 00 |
| 146 | E2, F1, F5, K4. | 1 85 |
| | | . 00 |

Wheels for Ewart's Drive Chain.

| | 4 | 9 | 00 | 10 | 12 | 14 | 16 | 18 | ଛ | 24 | 3 |
|----------------|------|-----|------|-------|------|------|--------|-------|--------|-------|-------|
| 1 | 18 | | 1 | 91 78 | A CO | 83 B | \$3.50 | 00 | \$5 00 | 00 9 | |
| ន | 3.5 | | 38 | 07 19 | 36 | | 25 | | | 2 00 | : |
| 3 | 38 | 3.5 | 38 | 35 | 88 | 3 50 | 88 | 4 50 | 2 00 | 9 | 7 50 |
| 30, 40, 43, 30 | 38 | | 38 | 36 | 88 | | | 4 50 | | | :: |
| 7 2 | 38 | 35 | 38 | 88 | 30 | 4 00 | 4 00 | : | _ | | 25 |
| 20 | 38 | 36 | 3 9 | 200 | 8 | | 4 80 | | _ | | 3 |
| 2, 10 | 1 28 | 8 | 0F 7 | 25 | 27. | | 8 | | | | 10 75 |
| 23 | : | | | 33 | 26 | | 4 90 | | - | | 000 |
| 78, 88 | : | | | 2 40 | 28 | | 38 | | | | 23 |
| 85, 95 | : | 3 | 8 | | 32 | , c | 38 | | | | 10 00 |
| 103 | : | | 25 | 3 | 200 | | 38 | | | | 13 00 |
| 108 | : | : | : | | : | : | 3 | 16 00 | 18 00 | 10 22 | Idler |
| 1060, 1075 | : | : | : | 8 | 2 | : | 9 | | | | : |

Wheels bored and key-seated or furnished with set screws at above prices. A reduction will be made on wheels not bored

MEMO.

Nos. 35 and 45 work on same wheels as No. 55, but are cheaper and lighter in weight

and strength.
Nos. 57 and 67 work on same wheels as No. 77, but are cheaper and lighter, and are not ribbed as No. 77 is, but are shaped like No. 55.

No. 75 is a fine size for light transfers, live rolls, tie and pole loaders, cord wood elevators, lumber trimmers, slash tables, shingle block tables. No. 78 and 88 are stronger

chains working on same wheels as No. 75.

Order S1, attachments for light sawdust carriers.

" S2, " Leavy " Leavy "

Files and Rasps.

KEARNEY & FOOT CO

| | • | - ' - |
|------|-----|--------|
| Mill | and | Round. |
| | | |

| | | | 1 |
|---------|-----|---|-----|
| B.E.111 | - 3 | D | 11. |

| Inch. | Bastard | 2d Cut. | Smooth. |
|-------|---------|---------|---------|
| 4 | \$1 80 | \$2 15 | 82 40 |
| . 5 | 2 00 | 2 40 | 2 65 |
| - 6 | 2 25 | 2 65 | 2 95 |
| 7 | 2 55 | 3 00 | 3 30 |
| 8 | 2 90 | 3 40 | 3 70 |
| 9 | 3 30 | 3 85 | 4 20 |
| 10 | 3 80 | 4 40 | 4 80 |
| 11 | 4 50 | 5 20 | 5 65 |
| 12 | 5 40 | 6 20 | 6 75 |
| 13 | 6 50 | 7 45 | 8 05 |
| 14 | 7 80 | 8 90 | 9 65 |
| 15 | 9 30 | 10 60 | 11 45 |
| 16 | 11 00 | 12 50 | 13 40 |

Flat and Square.

| Inch. | Medard | 2d Cut. | Smooth. |
|-------|-----------|---------|---------|
| | 82 M | \$2 40 | \$2 65 |
| . 4 | 2,20 | 2 60 | 2 90 |
| 0 | Na 2 50 A | 2 95 | 3 25 |
| 7 | 1 5 DOC | 3 40 | 3 75 |
| 8 | 3 40 | 4 00 | 4 35 |
| 9 | 4 00 | 4 70 | 5 10 |
| 10 | 4 70 | 5 45 | 5 90 |
| 11 | 5 60 | 6 50 | 7 05 |
| 12 | 6.70 | 7 70 | 8 40 |
| 13 | 8 00 | 9 15 | 10 00 |
| 14 | 9 50 | 10 90 | 11 80 |
| 15 | 11 20 | 12 75 | 13 75 |
| 16 | 13 10 | 14 85 | 16 00 |

Hand, Warding and Pillar.

| Half | Rd. | and | Three | Square. |
|------|------|-----|-------|---------|
| пып | "ru. | min | Turee | oquare. |

| In | ich. | Bastard | 2d Cut. | Smooth. | Inch. | Bastard | 2d Cut. | Smooth |
|----|------|---------|---------|---------|-------|---------|---------|---------|
| | 4 | \$2 25 | \$2 70 | \$3 00 | 4 | \$2 50 | 3 00 | \$3 30 |
| | 5 | 2 50 | 3 00 | 3 30 | 5 | 2 80 | 3 35 | 3 70 |
| • | 6 | 2 80 | 3 30 | 3 65 | 6 | 3 20 . | 3 80 | All des |
| | 7 | 3 20 | 3 75 | 4.15 | 7 | 3.70 | 4 4 35 | |
| | 8 | 3 70 | 4 35 | 4 75 | 8 | 4 30 | 5 00 | 5 50 |
| | 8 | 4 35 | 5 10 | 5 55 | 9 | 5 00 | 5 85 | 6 40 |
| | 10 | 5 20 | 6 00 | 6 55 | 10 | 5 80 | 6 75 | 7 30 |
| | 11 | 6 30 | 7 30 | 7 95 | 11 | 6 70 | 7 75 | 8 45 |
| | 12 | 7 50 | 8 60 | 9 40 | 12 | 7 80 | 9 00 | 9 75 |
| 2 | 13 | 8 90 | 10 20 | 11 00 | 13 | 9 10 | 10 40 | 11 25 |
| | 14 | 10 50 | 12 00 | 13 00 | 14 | 10 60 | 12 10 | 13 10 |
| | 15 | 12 30 | 14 00 | 15 10 | 15 | 12 40 | 14 15 | 15 25 |
| | 16 | 14 30 | 16 20 | 17 50 | 16 | 14 50 | 16 50 | 17 70 |

Extras.

| Mill Double Cut, | advance 1 | inch. |
|---------------------|-------------|-------|
| Mill Narrow Point | 8, " 1 | 44 |
| Cross Cut Blunt, | . " 1 | 46 |
| Cant Blunt (Double | e Cut).ad.2 | -66 |
| Ginsaw (Single), ta | | |

Extras.

| Slotting (Blunt), Knife, | advance | 2 | in. |
|--|----------|---------|-----|
| High Back Hlf. Rd. (I | 31'nt)** | 2 | |
| Cross (Blunt). | | 2 | 66 |
| Cross (Blunt), Feather Edge (Blunt) | 66 | $ar{2}$ | " |

Files and Rasps-Continued.

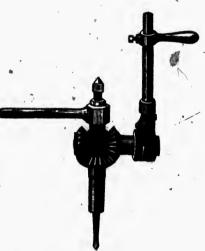
| | 8 | • | INCH. | 8 | ਲੈਂ | 4 | 4 44 | - I | 04 | 5 | 9 | 1 | <u> </u> | ∞ | | | 9 1 | = | 9 10 11 12 | | 21 | _ ! | 14 |
|--------------|------------------------------|--|---------------------------------------|---|------------|--|------|------|---------|--------|-----------------------|------|----------|------|--------------------------|-----|-----|-----------|------------|--------|-----|------|---------|
| | | 9 | • | 69 0 69 0 0 69 0 0 69 0 69 0 69 0 69 0 | 0 | 69 | 00 | 69 | ပ | 69 | * | 69 | o | 0 | • | 69 | ď | ပ် ••• | 69 | ن ن | oʻ | | ပ် တ |
| Tapers, | | Single Cut. 1.10 1.10 1.20 1.40 1.70 2.00 2.40 3.00 3.80 4.00 5.70 7.20 9.00 11.00 13.20 | Cut. | 1.10 | 1.10 | 1.2 | 1.4 | 10 | 2. | 2.00 | 02.4 | 603. | 8 | 3.80 | 4.6 | 50 | 2 | 7:20 | 6 | 8 | 1.0 | 0 13 | .23 |
| 3 | | Double " 1.601.601 75 2.00 2.40 2.75 3.25 4.00 4.95 5 90 7.10 8.80 10.80 12 90 15.20 | * | 1.60 | 1.60 | 1 7 | 2.0 | 00 | 40 | 2.7 | 53.2 | 4 | 8 | 9. | 20 | 8 | 10 | 8.8 | 010 | 80 | 6 2 | 0 15 | 8 |
| Slim Tepers, | pers, | Single | × | 1.201.201.301.451.701.902.102.503.003.704.505.506.808.3010.00 | 1.20 | 1.30 | 4. | 121 | 02. | 1.9 | 02.1 | 0.2 | 22 | 3.00 | 3.7 | 704 | 25. | 5.50 | 6. | 8 | 8 | 010 | -8 |
| 3 | | Double " | | $1.801.801.902\ 10\ 2.40\ 2.60\ 2.85\ 3\ 30\ 3.90\ 4.70\ 5.60\ 6.75\ 8.20\ 9.75\ 11.50$ | 1.80 | 1.9 | 2 | 102 | .40 | 2.6 | 0.2.8 | | 30 | 3.9 | 4. | 0.0 | 8 | 6.7 | 800 | 8 | 9.7 | 511 | 32 |
| Pitsaw | Pitsaw Blunt, | Single " | | 2.10 2.10 2.20 2.30 2.50 2.80 3.20 3.70 4.30 5.00 5.80 6.70 7.70 | 2.10 | 2.2 | 2.5 | 8 | 8 | ≈ ∞ | 0.3.2 | 8 | 20 | .3(| 5.0 | 20 | 8 | 6.7 | .7 .0 | 2 | : | ÷ | : |
| Hookt | Hooktooth " | 2. | , | 3.60 3.90 4.40 5, 10 6.00 7.10 8.40 | | : | : | ÷ | 5- | : | 8. | 30 | 8 | 4.4 | | 9 | 8 | 7.1 | 8 | 40 | : | | |
| | | · | | | | | K | E | BXTRAS. | αġ | | | | | | | | | | | | | n |
| - | Bandsaw, | Bandsaw, Heavy, Blunt, take Taper Double Cut Price, | 3lunt, | take | Tap | H L | oub | le (| Cut | Prio | -, se, | Taj | per | Poi | Taper Points same price. | Sam | e D | rice. | | | | | |
| | : | Light, | : | : | Silm Taber | 185 | 4 | | | | | | | | | | | , | | | ~ | | |
| | Candlaw, Round Gulleting. | | Blunt, Single Cut, take Pitsaw price. | Sing | S | ************************************** | tak | - E | tsa | w p | rice. | | | | | | | | | | .* | | |
| 27 | Round Of | • | : | | * | | take | H | ook | toot | take Hooktooth price. | ice. | | | | | | | | | | | |
| | 10 23 70 ner doz. | | 1 | | 1 | * | c | - | | ** | | - | | ; | , | - | 1 | | | | | | |

Ratchet Drills.

SANDIFORD'S.

LOWELL REVERSIBLE.

| No. | 1. | 10-i | nch | handle | \$6 | 00 | |
|-----|----|------|-----|--------|-----|----|---|
| " | 2. | 12 | " | 66 | 8 | 00 | |
| " | 3. | 15 | " | 66 | 10 | 00 | • |



SANDIFORD'S CONTINUOUS MOTION.

The "Cushman" Chuck.

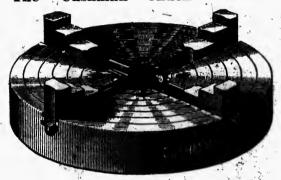
Combination Lathe Chucks.

| | Three jaws. | Four jaws. | | Three jaws. | Four jaws. |
|--------|-------------|------------|---------|-------------|------------|
| 4-inch | \$26 00 | \$32 00 | 18-inch | \$62 00 | \$75 00 |
| 6 " | 26 00 | 32 00 | 21 " | 1 80 00 | 96 00 |
| 9 " | 34 00 | 42 00 | 24 " | 100 00 | 120 00 |
| 12 " | 44 00 | 56 00 | 30 " | 170 00 | |
| 15 " | 52 00 | 64 00 | 36 '' | 230 00 | |

Improved Two-jawed Chucks.



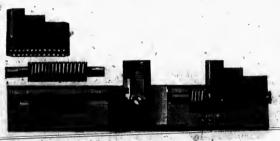
The "Cushman" Chuck-Continued.



Independent Four-jaw Chuck.

WITH REVERSIBLE JAWS.

| Diameter. | Weight. | Diameter. of Hole. | Diameter of Face-Plate. | Price. |
|-----------|---------|-----------------------|-------------------------|---------------|
| Inches. | Pounds. | Inches. | • Inches. | |
| 43 . | 6. | 1 ' | 4.8 | \$14 00 |
| å | 11 | 18. | $5\frac{11}{16}$. | 18 00 |
| 8 | 25 | 1 | 43 | 22 00 |
| 10 | 35 | 2 | 48 | 26 00 |
| 12 | 54 | 3 | $6\frac{11}{16}$ | 30 0 0 |
| 14 | 72 | 3 `` | 671 | 34 00 |
| 16 | 86 | 3 | 611 | 38 00 |
| 18 | 113 | · 4· · | 744 | 44 00 |
| 20 | 122 | 4 | 718 | 50 00 |
| 22 | 172 | 43 | 91 | 57 00 |
| 24 | 193 | 44 | $9\frac{7}{2}$ | 65 00 |



The "Cushman" Chuck-Continued.

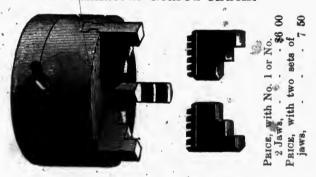


Two-jaw.

BOX BODY.

| Size. Inches. | Jawa. Take. Inches. | Price. Round Body. | Box Body. | Ex. Slip. Jaws. Iron. Per pair. | Ex. Slip. Jaws. Steel. Per pair. |
|------------------|---------------------------|--------------------------|--------------|--|---|
| . 6 | 21/2 | \$20 00 | | \$1 00 | \$2 00 |
| 7 | 3 | 24 00 | \$24 00 | 1 00 | 2 00 |
| 9 | 4 | 30 00 | 30 00 | 1 25 | 2 50 |
| 12 | 6 | | 36 00 | 1 25 | 2 50 |
| 15 | 8 | | 42 00 | 1 50 | 3.00 |

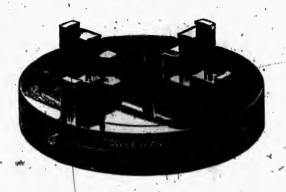
.The Amateur Geared Chuck.



Planer Chucks.

| | | | 9 8 | square Base. | Swivel Base. |
|--------|------|---|------|--------------|--------------|
| 10 x 7 | r | - | •4 | 30 | 35 00 |
| 12 x 8 | | | | 35 | 40 00 |

The "Sweetland" Chuck.



Combination Chuck.

BOTH INDEPENDENT AND UNIVERSAL.

| Diame | eter. | | Four Jaws. Price. |
|-------|-------|---------|-------------------|
| 6-i | nch | \$26 00 | \$32 00 |
| 9 | " | 34 00 | 42 00 |
| 12 | " | 44 00 | 56-00 · |
| 15 | " | 52 90° | 64 00 |
| 18 | 46 | 62 00 | 75 00 |
| 21 | 66 | 80 00 | 95 00 |
| 24 | " | 100 00 | 120 00 |
| 30 | " | 170 00 | 200 00 |
| 36 | 66 | 220 00 | |
| Car W | heel | s250 00 | \ |

Independent Chuck.

FOUR JAW.

| * | 2004 | 011. | 5 42 |
|-----------|---------|-----------|---------|
| Diameter. | Price. | Diameter. | Price. |
| 6-inch | \$18 00 | 21-inch | \$55 00 |
| 9 " | 24 00 | 24 " | |
| 12 " | 30 00 | 30 " | |
| . 15 " | 35 00 | 36 " ., | 150 00 |
| 18 " | 44 00 | 1. | |

Drill Chucks.



No. 1 holds θ to $\frac{1}{2}$ inch θ to $\frac{1}{2}$ inch

\$7 00 8 00

The "Giant" Drill Chuck.

HOLDS EITHER STRAIGHT OR TAPER SHANK.



No. 1 holds 0 to 18 inch
" 2 " 0 to 8 "
" 3 " 18 to 8 "

The "Reid" Drill Chucks.

No. 1 holds 0 to 1 inch " 2 " 0 to 4 "

\$10 00 12 00

Emery Machinery

| | - | W. 1919 | The state of the s | Price. |
|--|---------------|--------------|--|---------|
| Single Emery Stand, | with O Shaft | t, 15 16 man | drel | \$18 00 |
| No. 1. Double Emery S | tand, with Sh | aft, 13-16 n | nandrel | 20 00 |
| No. 2 " " " | 66 65 66 66 | 1,46 % | | 30 00 |
| No. 1. Rodgers Saw Sh No. 2. Do., up to 48 in | arpener, com | plete | - M | 50.00 |
| No. 2. Do., up to 48 in | circular | | | 65 65 |
| No. 3. Do. 72 " | 69.74 | | | 75 00 |
| No. 3. Dec. with Gang | Attachment. | | | 85 00 |
| Peerless San Bharrage | | | | 200 00 |
| Bush's Knife Spargene | up to 30 in. | long | | 175 00 |
| Union Stone Bully Sh | arpener, up t | o 24 in | | 125 00 |
| The state of the s | | | | |
| Marie Contraction of the Contrac | | | CAR TAN | 165 00 |
| te de la | | | | 180°00 |
| " Co before inge | | | | 200 00 |
| see | | | | 250 00 |
| | | 120 " | is | 300 00. |

Stone and Ore Crushers (Farrel & Marsden Pattern).

(Send for Circulars.)

| Size, or Receiving Capacity. | Approxim'te pro- duct per hour, in cubic yards, to two inches. | Weight of Heaviest Piece. | Total Weight. | Horse Power Req'red. | Cash Price delivered on board. |
|------------------------------------|---|------------------------------------|------------------|----------------------------|---|
| Inches. | ,* | lbs. | lbs. | i. | |
| 3x11 | * | 40 | 100 | | \$ 50 00 |
| tx2 | One. | 560 | 1,200 | 4 . | 180 00 |
| 10x4 | Three. | 1,800 | 4,900 | 4 | 3830 00 |
| 10x7 | Five. | 3,800 | 7,800 | 7 | 00 00 |
| 15x9 | Eight. | 6,800 | 14,500 | 10.46 | 00 00 |
| 15x10 | Nine. | 7,300 | 15,000 | 12. | 975 00 |
| 20x6 | Thur. | 4,800 | 11,000 | 4.6 | 780 00 |
| 20x10 | | 7,700 | 17,000 | ALC: NO | 1,300 00 |
| 18x24 | | , , | | B SOL | |
| | | | | 14. | |

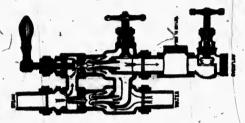
Emery Wheels.

In ordering, state the kind of work you wish to do, and give size of Mandrel.

| ninnta | , ca | - | - | od+ | | - | . 11 | | · * | | 138 | <u>.</u> | | - | 2 3° | | က | - 4 | -40 | 7. | | |
|--------|------|------|--------|------|------|-------|------|----------|----------------|-----------------------|-----|----------|---|------|-------------|--|-----|-----|-----|------|-----------|----|
| | | H. | 2 | , | | | • | | • | - | | ! | | _ | | | | 9 | | _ | Ĩ | |
| 7.400 | 6. | 50 | 80 | 6 | 1 20 | 1 10 | г | 22 | 1 | | | | | _ | | | 14 | | | က | 8 | |
| 5.450 | 4 | 8 | 1.10 | 13 | 183 | 99 | -4 | 8 | 67 | 20 | 67 | 20 | 2 | 75 3 | 3 25 | 3 | 88 | 4 | 8 | 10 | 8 | |
| 4,400 | is. | 1 00 | 1 40 | 1 8 | _ | | , CN | 8 | 8 | _ | - | | | | | | • | | | 7 | 4 | |
| 3.600 | 9 | | 1 75 | 2 | _ | | c | 2 | 4 | _ | _ | | _ | | | | | | | 7 | Ö, | |
| 3.150 | | 1 85 | 2 30 | 3 1 | | | 10 | 8 | 9 | _ | - | | | _ | | | | | | 13 | 2 | |
| 2.750 | oc | | 2 60 | 8 | | | ,20 | 2 | _ | - | _ | si. | _ | | | _ | _ | | _ | ° 16 | 8 | |
| 2.450 | 6 | | 43, 16 | | _ | | 9 | 8 | _ | _ | - | | - | | | <u>. </u> | • | | _ | 2 | 75 | |
| 9.00 | 10 | | 3 70 | | | | 700 | 10 | | | | | | _ | | | .,. | | | 23 | 8 | |
| 1.850 | 12 | | 4.00 | _ | " | | 6 | 8 | _ | | _ | _ | _ | | | _ | - | | | 77 | 50 | |
| 600 | 14 | | 6.25 | | _ | | -13 | 22 | | _ | | _ | _ | | | | _ | | | 37 | Z | |
| 1.400 | 16 | 0 | 1 | 11 0 | | 13 70 | 16 | 8 | 19 | | | | _ | | | _ | | | | 48 | 75 | |
| 1.250 | 18 | | | _ | _ | | 2 | 75 | - | - | | | _ | | | | _ | | | 62 | 8 | |
| 100 | 200 | 0 | | | | | ß | 8 | _ | | _ | | - | _ | • | | _ | | | 75 | 8 | |
| 1,000 | 22 | | | | -: | | 83 | 87 | - | _ | | | _ | | - | _ | ••• | - | - | 91 | 3 | |
| 925 | 2 | | | | : | | | | | - | _ | | _ | | | _ | _ | | | 113 | 8 | |
| 73.5 | 2 | | | 5 | _: | • | : | <u>:</u> | : | : | : | | - | Г. | | | _ | _ | • | 175 | 8 | |
| 250 | 38 | | | | : | | | -; | : | $\frac{\cdot}{\cdot}$ | : | = | _ | | | _ | _ | ••• | | 250 | 8 | |
| apti | - | , | , | 4 | _ | | | - | e. | - | | - | | 4. | ; | _ | | | | | de magnes | B. |
| - | - | 100 | - | | 1 | | | | | l | | | | | ĺ | | | l | l | I | 1 | |

PRIOR LIST OF EMERY WHEELS.

Western Empire Boiler Feeders.



OVER 100,000 IN USE.

| | No. | Gallons per Hour. | Horse Pôwer will Supply. | Suction and Feed. | Steam. | Price. |
|----|-----|----------------------|-----------------------------------|-------------------------|----------------|----------|
| | 1 . | 60 | 8 | 38 | 3 | \$ 18 00 |
| | 2 | 90 | 12 | 1/3 | 38 | 20 00 |
| | 3 | 120 | 。 16 | 1 * | . š | 24,00 |
|). | 4 | 220 | 30 | , <u>\$</u> | 1 3 | 30 00 |
| | 5 | 300 | 40 | # | 1/2 | 35 00 |
| | 6 . | 420 | 56 | 1 | 3 · | 45 00 |
| | 7, | 540 | 72 | 1 . | 2 | 50 00 |
| 0 | 8 | 720 | 96 | ,14 | 1 | 55 00 |
| 1 | 9 | 900 | 120 | 11 | 1 | 60 00 |
| | 10 | 1,260 | 168 ' | 11/4 | 11 | 75 00 |
| | 11 | 1,740 | 230 | 11/2 | · 1} | 90 00 |
| | 12 | 2,236 | 298 | ~ 2 | . 11/2 | 110 00 |
| | 13 | 2,820 | 376 | 2 | 11/2 | 125 00 |
| | 14 | 3,480 | 464 | 21/2 | 2 4 | 150 00 |
| | 16 | 3,600 | 600 | 21/2 | 2 - | 175 00 |

The Penberthy Improved Automatic Injector.



OUR PROPOSITION.

As every injector is tested before it leaves the factory, we know that if properly connected as in diagram furnished, and instructions are carried out, they cannot fail to work. We therefore offer to pay the expenses of any man to come to the factory, and \$10 per per day while there, if the Injector does not work, providing it has not been misused.

As the body will last for years, it is only necessary to order working parts to make Injector good as new. Every purchaser can repair his own Injector without sending it to factory.

| Size. | Price. | Gallons per hour 65 lbs. pressure. | Size of Pipe Connection. | | lors | |
|--------|---|---|---|--|------|--|
| No. OO | \$ 16 00 18 00 20 00 25 00 30 00 40 00 45 00 55 00 60 00 75 00 | 60 85 120 220 300 430 540 700 900 900 1,740 | 1 1 144 4 144 144 144 144 144 144 144 1 | 4 8 12 16 28 40 57 72 93 120 160 | 66 | 8 12 16 28 40 57 72 93 120 160 220 |
| No. F. | 110 00 125 00 | 2,240 2,870 | 2 2 | 220 290 | | 290 308 |

A written guarantee with each Injector.

The Improved Boiler Feeder.



NEW STYLE, WITH MCAVITY'S PATENT IMPROVEMENT.

These are constructed in two parts, as shown, one side being designed for lifting and delivering, and the other for forcing against pressures. The lifting side only need be used to raise water to a moderate height, and for extreme height the forcing side.

Each Boiler Feeder carefully tested and proved before

leaving the Factory. "

Price List of the Improved Boiler Feeder with McAvity's Patent Improvement.

| Number. | Suction & Feed. | Steam | Galls. per hour 60 lbs. pressure | Suitable for Horse Power | Price. |
|------------------------------------|---|---------------------------------------|--|--|---|
| 71 84 10 121 15 171 | 310-12-12-12-12-12-12-12-12-12-12-12-12-12- | chorpora-national | 60 90 120 20 00 360 540 | 2 to 8 5 " 12 10 " 20 15 " 30 20 " 40 30 " 60 40 " 80 | \$18 00 20 00 24 00 30 00 35 00 45 00 50 00 |
| 22½ 25 30 35 40 45 | 11 11 11 11 11 11 11 11 11 11 11 11 11 | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 720 900 1,260 1,740 2,230 2,820 | 50 " 100 70 " 120 110 " 160 150 " 225 220 " 300 300 " 400 | 55 00 60 00 75 00 .90 00 .110 00 125 00 |

Buffalo Forges and Hand Blowers.

I have the exclusive Canadian agency and keep in stock at all times a full assortment of these very excellent Forges and Blowers.



FORGE No.1.

| No. | Size of Hearth. | Diam. of Fan. | Wt. com- plete. | Price with open Hood. | Price with Dash. | Price with closed Hood. | Price arranged for Power |
|-------|---|---------------------|-------------------------|--------------------------------|------------------------|-------------------------------|--------------------------------|
| 0 1 4 | 28 in. x 40 in. 21 in. x 27 in. 18 in. round. | 12 in. | 2501bs 150 " 85 " | \$45 00 30 00 26 00 | 29 00 | 32 00 | \$50 00 35 00 30 00 |
| 6 | 14 n. round | 5 " | 40 " | 18 00 | 17 00 | PRICE. | PRICE. |
| B | owers 12 in. Fa | | | | | \$25 00 22 00 | \$28 00 26 00 |



Jack Screws.

| | | No. 2. | No. 3. |
|---------------------------------|---------------|--------------------|----------|
| Diam. of Screw | 2 in. | $2\frac{1}{2}$ in. | 3 in. |
| Length of Screw | 13 " | 15 " | 17 " |
| Height over all when screwed | | | |
| down | 19 " | 211 " | 23 '' |
| Weight | 54 lbs. | 72 lbs. | 106 lbs. |
| Price | \$8 00 | \$11 00 | \$20 00 |

Alligator Wrenches.



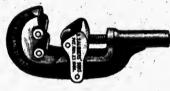
Malleable Iron Pipe Vises.

| No. 1, | holds pipe | ま | to | 2 | inches, | weighs | 15 lbs | \$10 | 00 |
|--------|------------|---|----|---|---------|--------|------------------|------|----|
| No. 2, | " | 1 | to | 2 | " | " | 30 lbs | 15 | 00 |
| No. 1, | \ •• | 1 | to | 2 | . 66 | " | 22 lbs. open jaw | 12 | 00 |
| No. 2, | 66 | 1 | to | 2 | | | 36 lbs. " | | |



Brock's Patent Chain Tongs.





1 Wheel Pipe Cutter.

| No. 1, cut | s pipe | 1 to 1 | inch | 1 | 00 |
|------------|--------|--------|------|---|-------|
| No. 2, | | 1 to 2 | 66 | | 6 00 |
| No. 3, | ** | 2 to 3 | -66 | | 18 50 |

3 Wheel Pipe Cutter.

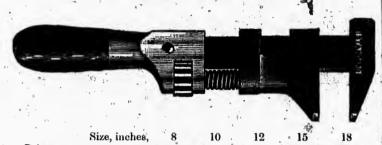
| No. 1, cut | s pi | pe { | to | 34 | inch | ١ | | ٠. | | | | | | | \$4 | 50 |
|------------|------|------|----|----|------|---|------|--------|------|-----|------|---|----|-----|-----|----|
| No. 2, | it ' | | to | 2 | " | | | | | | | · | ٠. | `:. | - 7 | 50 |
| No. 3, | 44 | 1 | to | 3 | 66 | | | | | :'. | | | | | 12 | 50 |

Tube Cleaners.



Size, inches, / 2 2 3 3 3 4 Price...... \$2 00 \$2 50 \$3 00 \$3 50 \$4 00

Standard Wrenches.



The Diamond Wrench.

Price per doz...... \$10 00 \$12 00 \$14 00 \$24 00 \$30 00



Size, inches, 8 10 12 15 18 Price per doz.......\$10 00 \$12 00 \$15 00 \$24 00 \$30 00

The Engineer's Wrench.



Heavy Steel Lathe Dogs.

With Steel Screws. U.S. Standard, and the Points Hardened.)



This Dog has a very heavy Boss, so that if the thread wears a heavier screw can be substituted.

| | Inch. | | | | Price. |
|---------------------------------------|---|-------------|------------|---------------------------|--------|
| 1: | 8. 4 | . \$0 40 | 13 | $\dots 21 \dots$ | \$1 35 |
| 2., | | . 50 | | | 1 45 |
| 3. , | \$ | 60 | 15 | 3 | 1 60 |
| · · · · · · · · · · · · · · · · · · · | * (*) | 60* | 16 | $3\frac{1}{2}$ | 1 80 |
| 15. | V. 18 | 70 | 17 | | 2 10 |
| . 0 | · A · · · · · · · · · · · · · · · · · · | | 18: | | |
| 7 | 1 | . 80 | 19 | | |
| | 1. 1. | | . Full set | | |
| | 18 | 95 | | $\dots 5\frac{1}{2}\dots$ | 4 00 |
| 10 | ke. 113 | '95 | 21 * | 6 · , | 5 00 |
| | M 14 | 1 10 | 22 " | 7 | 6 00 |
| 12 | 2 | 1 20 | . 23 · " | 8 | 7 00 |
| One smal | l set of 8, by 1 | in. to 2 in | n | | |
| One set o | f 12, by 1 to 2 | n. continu | ed by to | 4 in | 13 00 |

When ordering, state as above, whether a full set, or a set of 12, or small set of 8 is wanted.

Steel Dog Wrenches.



Fitting screw heads from \$ to 2 in square. ver for both Dogs and Tool Post. Price 75 cents each:

Straight Tail Lathe Dogs (with Steel Screws).

U.S. Standard, and the points hardened. To be driven from a stud in the face plate.

It is from the same pattern as the Heavy Steel Dog, and warranted, like that, not to break with any work.



This pattern will stand much more than a bent tail, and some prefer them on account of their direct action on the work.

| -6 | | | | |
|-----|---------|--------------|--------------------------------------|---------|
| No. | Inch. | Price. No. | Inch. | Price. |
| 1 | . 3 | \$0 60 11. | | .\$1 45 |
| 2. | . 7 | 70 12. | 3 | . 1 60 |
| | | | 3 1 | |
| | | | 4 | |
| 5. | .14 | 80 15. | $\dots \dots 4\frac{1}{2}\dots\dots$ | . 2 75 |
| | | | | |
| .7. | .11 | 95 17. | A | . 4 00 |
| 8 | .18 | 1 10 18. | 6 | . 5 000 |
| | | | | |
| | | | | |
| | | | | |

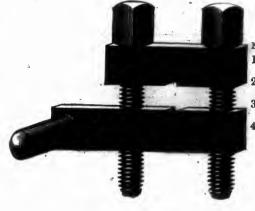
One Set to 2 inch, \$7.80. Full Set, \$44.10.

Plain Wrenches.

| No. | 1, | 4 | and | 10 | inch | | | | | | | | | | | | | | | | |
|-----|----|-----|-----|-----|-------|---|--|---|---|--|-----|---|---|---|---|---|----|---|---|----|---|
| 66 | 2, | # | 66 | 18 | 66 | | | | | | | | | | | | | | | 40 | |
| 66 | 3, | 2 | 66 | 18 | | | | | | | | | | | | | | | | 50 | |
| 66 | 4, | . # | 66 | T | 66 dh | | | | | | | | | | | | | | | 60 | |
| 66 | 0, | 1 | " | 1.1 | 66 | | | | | | • • | | - | | | | | | | 90 | |
| | 0, | 18 | 66 | 14 | 66 | | | | | | | | | | | | | | | 50 | |
| | 1, | 18 | | 13 | . • | ٠ | | • | • | | 3 . | • | é | • | • | * | ٠, | ø | 2 | 50 | 1 |

Steel Clamp Dogs.

These are made from the Steel Bar. They will carry all that can be put into them.



PRICES.

No. Opens. 1 I inch. \$1 25

14 " 1 50

2 " 1 75

3 4 2 00

Full Set. \$6 50

Vise Clamps.

WITH 2 SCREWS. STEEL CASTINGS.

| No. | 1, | opening | to 11 | inch | | | | | | | | | | | | | | | 3 | | \$1 | 25 | |
|-----|----|----------|-------|------|--|--|------|--|-----|--|---|---|-----|-------|------|---|---|---|-------|--------|---------|----|---|
| ••• | 2, | 6.6 | 21 | 6.6 | | | | | | | , | , | | | | | | | 3 | Date . | 1 | 50 | į |
| 6.6 | 3, | 6.6 | 31 | 6.6 | | | | | . , | | | | . , | | | i | ì | | | | 2 | 00 | |
| 66 | 4, | 6.6 | 41 | 6.6 | | | | | | | | | | | | , | - | , | | . 7 | 2 | 50 | |
| 66 | 5, | 6.6 | . 51 | 6.6 | | | | | | | | | | | | | | | | | 3 | 25 | |
| 6.6 | 6, | 6.6 | 61 | 6.6 | | | | | | | | | | | | | | | | | | 00 | |
| | , | | - | | | | , | | | | | | | · | | | • | | | | * | 70 | |
| | | T3 11 CI | 4 | | | | | | | | | | | | | | | | | | | - | |

Steel Chuck Drill Holders.

FOR LATHE WORK.

| No. 1, | taking | Drills | from | to | 9 16 8 | | | | | | | | | 50 |
|--------|--------|--------|------|------|--------------|------|-------|------|-------|------|-------|------|-----------|----|
| | 2 66 5 | | £6 1 | g ((| 11 | 66 | · b · | | ٠ | | | | * | 80 |
| 1 4, | . 66 | ., 66 | "11 | . 44 | 15 | 66 | | | | | Ì | | · 145 | 75 |
| 5, | 6.6 | .66 | " 18 | 6.6 | 2 | 44 . | | | | | | | | 90 |

Vises.

The "Fisher" Double Screw Parallel Leg Vise,



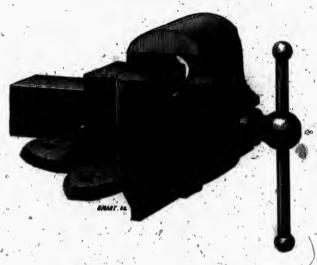
PRICE LIST.

| No: | Weight. | Face of Jaws. | Opens. | Price Each. |
|-----|---------|------------------|--------|----------------|
| 1 | 25 lbs. | 31 in. | 41 in. | \$8 50 |
| 2 | 65 " | 41 " | 51 " | 12 50 |
| 3 | 90 " | 5į " | 61 " | 19 00 |
| 4. | 120 " | 61 " | 71 "" | 25 00 |
| 5 | 150 " | 7 " | 9 " | 32 00 |
| 6 | 160 " | 8 " | 10 . " | 36 00 |

Note. The No. 1 is too small to require a Leg, and is therefore made without it.

This vise requires very little more power to move than the ordinary single screw vise. It holds the work parallel always, at any opening up to the full measure of its capacity. The jaws are made of the best tool cast steel, welded on, file cut, properly hardened and of convenient shape; and for a strong, durable, convenient vise there is nothing to equal this "Fisher" vise in the market.

The Simpson Vise.



Stationary Bench Vises.

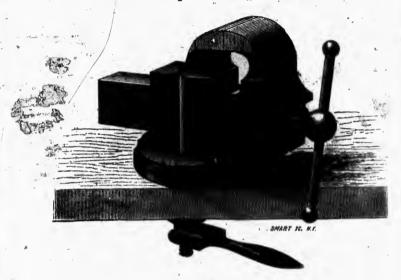
| ~ | | , | | Width | of jav | vs. | Jav | в ор | en. | , | Wei | ght. | Pr | ice. | |
|--------|----|-----|---|-------|--------|-----|-----|------|------|---------|-----|--------|-----|------|---|
| No. | 29 | | | 27 | inche | s. | 34 | inch | nes. | 1 | 154 | lbs. | \$4 | 75 | |
| 66 | 30 | | 5 | · 3½ | 6,6 | | 4 | 66 | | | 26 | 66 . , | • | 50 | |
| . ` 66 | 31 | r 0 | | 4 | 1 66 | | 5 | 6 6 | | | 37 | 4.8 | 8 | 00 | |
| + 6 | 32 | | | 41 | 66 | | 53 | 6 6 | | | 49 | 66 - | 10 | . 00 | - |
| 66 | 33 | | | 5 | 6 6 | | 61 | 66 | | Organia | 64 | " | 12 | 50 | |

. Standard Vise:

| | ٠, | | Width | f jaws. | Jaw | open. | Weight. | Price. |
|-----|----|---|----------------|---------|------|---------|-----------|--------|
| No. | 89 | y | 27 i | inches. | 31 | inches. | 16 - lbs. | \$4.75 |
| 66 | 90 | 1 | $3\frac{1}{2}$ | 6.6 | 4 | 66 | 261 " | 6 50 |
| 6.6 | 91 | | 4 | - Ba | 1, 5 | " | 38 | 8 00 |
| 6.6 | 92 | | 41/2 | ** | 26 | 66 | 00, 1 | 10 00 |
| 66 | 93 | | , 5 | 66 | 7 | *, | 65 . " | 12 50 |

These Vises are the same, in all respects, as the Simpson Vise, with the exception of the QUICK ADJUSTMENT.

The Simpson Vise-Continued.



Swivel Bench Vises.

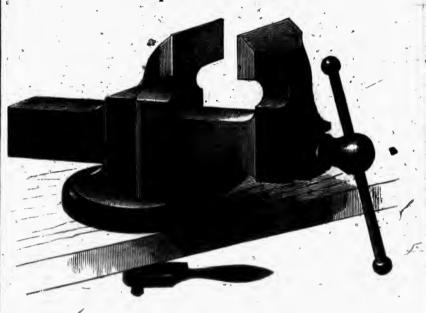
| No. | 11 | Width of | Jaws. | | open. | Weig | ght. lbs | Pri | ce. |
|-----|----|----------|-------|-------------|-------|------|-------------|-----|-----|
| 46 | | 27 | 46 | 31 | 66 | 174 | | - | 50 |
| 4.6 | 13 | . 31 | 44 | 4 | 6.6 | 28 | 6 6 | _ | 50 |
| 6.6 | 14 | 4 | 66 | 5 | " | 44 | 6.6 | 10 | 00 |
| 4 6 | 15 | 41/2 | 4.6 | 5^{3}_{4} | 4.6 | 59 | 44 | 13 | 00 |

Standard Pattern.

(Without quick adjustment.)

| , | | Width of Jaws. | Jaws open. | Weight. | Price. |
|-------|-------|----------------|------------|-----------|--------|
| No. | 79 - | 27 inches. | 31 inches: | 18 · lbs. | \$5 50 |
| , "66 | 80 ,7 | * 31 ** | - 4 "". | 281 0 | 7 50 |
| 46 | 81. | 4 . " | 5 . " | 45 " | 10 00 |
| - 64 | 82 | 41 " | 4 66 | 60 ." | 13 00 |

The Simpson Vise-Continued.



Swivel Coachmakers' Vises.

| | | Width of Jaws. | Jaws open. | Weight. | Price. |
|-----|----|----------------|------------|---------|---------|
| No. | 42 | 4 inches. | 81 inches. | 48 lbs. | \$11 50 |
| 66 | 43 | 41 " | 101 " | 58 " | 13 00 |

With Swivel Jaw.

| | Width of Jaws. | Jawe open. | Weight. | Price. |
|--------|----------------|------------|---------|---------|
| No. 46 | 4 inches. | 81 inches. | 52 lbs. | \$13 00 |



Double Chain Screw Hoisting Machines.

(In ordering Chains, allow four feet of Chain to each foot of Lift.)

This is the most complete chain block manufactured on the Continent. No factory can afford to be without it.

| Weight of Machine. | Lift. | To Rai | se. Price. | Extra Lift per ft. |
|-----------------------|-------|--------|-------------|--------------------------|
| | - h - | | 34 | - |
| 35 lbs. | 8 ft. | 500 1 | bs. \$27 00 | \$1 20 |
| 52 " | 8 " | 1,000 | 30 00 | 1 44 |
| 65 " | 8 " | 2,000 | ", 36 00 | 1 80 |
| 76 " | 8 " | 3,000 | 48 00 | 2 00 |
| 140 " | 9 " | 4,000 | " 66 00 | 2 40 |
| 226 " | 10 " | 6,000 | " 90 00 | 2 60 |
| 258 '' | 10 " | 8,000 | " 115 00 | 2 90 |
| 625 " | 12 " | 10,000 | " 170 00 | 3°60 |
| 750 " | .12 " | 12,000 | " 215 00 | 4.50 |
| 875 " | 12 " | 16,000 | " 315 00 | 5 70 |
| 925 " | 12 " | 20,000 | " 400 00 | 7 20 |

Force Pumps.

On base. With Air Chamber. Two discharges and cock.



 $2\frac{1}{2}$ -in. Bore, capacity per stroke $\frac{1}{6}$ gallon, for $1\frac{1}{4}$ pipe, each . . . \$12 50 3-in. Bore, capacity per stroke $\frac{1}{6}$ gallon, for $1\frac{1}{4}$ or $1\frac{1}{2}$ pipe. 14 50

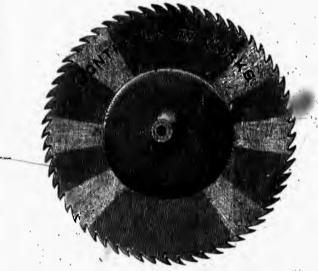
Wheel Barrows and Scrapers.

| WHEELED SCRAPER, or s | elf-loading and dump- \ No. 2, each No. 3, each | \$50 '90 55 90 |
|-------------------------|---|-------------------|
| DRAG SCRAPER, all steel | No. 1, 7 cubic feet, each | 13 00 12 00 |
| Wooden Railway Barrow | s, each | 2 00. |

Turbine Water Wheels.

Leffel's Double Turbine. The Vulcan Double Turbine, The Peerless Single Turbine.

| nches | , | , . 1. | f Lin." | 44 | ase. | | Peerless | |
|---|--|--|---|---|--|--|---|--|
| Size in Inches | Vents. | Material | -Price of | Price of "Leffel. | Globe Case. | Size Incheș | Vents. | Price. |
| 6 5 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 | 111 143 193 261 341 45 591 79 | Brass Brass Gates Iron """ """ """ """ """ """ """ | \$80 90 100 110 20 80 90 100 110 125 150 175 210 260 300 340 410 500 650 750 | \$70 80 85 90 100 75 80 90 100 118 135 215 2255 285 330 435 550 600 900 | \$50 55 60 65 70 75 80 90 100 115 130 175 | 6 8 10 12 14 16 18 21 24 27 30 36 42 48 | sq. in. 31/2 61/2 9 16 21 30 36 45 64 80 100 142 203 263 | \$60 75 90 110 130 150 180 225 250 290 340 400 500 |
| 7 <u>4</u> 84 96 | 991 1295 | " | | 1300 1500 | | 3 | | •••• |



PATENT MACHINE GROUND, OF EXTRA QUALITY AND SUPERIOR WORKMANSHIP

| Size. | Gauge. | Price. | Each Gauge extra. | Size. | Gauge. | Price. | Each Gauge extra. |
|--|----------------------------|--------------|----------------------|---|--------------------|-----------------|----------------------|
| 4 in. | 18 18 17 | \$0 70 | \$0 06 08 | 36 in. | 9 | \$21 00 | \$1 50 |
| 5 " | 18 | 0 92 | 08 | 38 " | 988887666655555555 | 24 20 29 40 | 1 75 2 25 |
| 6' " | 17 | 1 15 | 10 | 1 20 | 8 | 29 40 34 65 | 2 25 |
| 7 " 8 " 9 " | * 17 16 | 1 40 1 68 | 12 14 | 42 " | 0 | 42 00 | 2 75 3 20 3 75 |
| 9 " | 15 | 1 95 | 16 | 46 " | 7 | 49 25 | 3 75 |
| 10 " | 14 | 2 25 | 18 | 48 " | 6 | 57 75 | 4 50 |
| 10 " 12 " 14 " 16 " 18 " 20 " | 14 14 | 2 85 | 18 20 24 | 48 " 50 " 52 " 54 " 56 " 58 " 60 " 62 " | 6 | 65 65 | 4 50 4 75 |
| 14 " | 14 | 3 50 | 24 | 52 " | · 6 | 76 00 | 6 30 |
| 16 " | 13 | 4 40 | 30 | 54 " | 6 | 89 75 107 50 | 7 50 |
| 18 " | 13 13 12 12 12 | 5 30 | 30 45 48 52 | 56 " | . 5 | 107 50 | 9 00 10 50 |
| 20 " | 12 | 6 40 | 48 | 58 " | 5 | 126 50 | 10 50 |
| | 12 | 7 50 | 52 | 60 " | 5 | 130 00 | 12 00 |
| 24 " | 11 | 8 60 | 60 | 62 " | 5 | 162 75 | 13 00 |
| 26 " | 11 | 10 50 | 70 | 64 " | 5 | 189 00 | 15 75 |
| 28 " | 11 | 12 00 | 70 80 | 66 " | | 202 00 | 18 00 |
| 24 " 26 " 28 " 30 " 32 " | 10 | 14 00 | 90 | 68 " | 4 | 226 00 | 20 00 |
| 32 "' | 10 | 16 50 | 1 00 | 70 " | 4 | 252 00 | 22 50 |
| 34 " | 10 | 19 50 | 1 20 | 72 " | 4 | 284 00 | 25 00 |

In ordering, be careful to give diameter, gauge, size of eye, style of ooth (speed of Mill Saws, and whether right or left hand).

- French Band Saw Blades.

I have the exclusive agency, and import direct from the makers, in France, these well-known Saws. I purchase in long lengths, and braze to order. Every saw is guaranteed to the satisfaction of the purchaser. Customers can do their own brazing, if they so choose. Prices are for unbrazed Saws. Brazing extra, as per List. Give extreme lengths in ordering, and be particular to say whether you want the Saws brazed or unbrazed.

| Width. | Price Per Foot. | Width. | Price Per Foot. | Width. | Price Per Foot. |
|-------------|--------------------|--------|--------------------|-----------|--------------------|
| 1 in. | 10 cts. | in. | 14 cts. | 1 in. | 22 cts. |
| 3-16 " | 10½ " | | 16 " | 11 " | 26 " |
| 1 " | 11 " | | 18 " | 12 " | 30 " |
| 1 8 " | 12½ " | | 20 " | 12 " | 40 " |
| Brazing abo | ve, 25 " | | bove, 40c. | Brazing a | bove, 60 " |

Band Saw Supplies.

| Silver S 5 in. 3-S | Square | Files. | per doz | 2 | 00 75 | Brazing Tongs, Filing Clamps, | | \$1 4 | |
|-----------------------|--------|--------|---------|---|----------|----------------------------------|---|----------|----|
| 6 " | 76 | " | " | 3 | 00 | Brazing Clamps. | | 3 | |
| 7 '' | 4.6 | " | " | 3 | 50 | Band Saw Sets, | " | 12 | 00 |
| | | | | | | Wheels and Boan | | 10 | 00 |

These Files are made specially for filing the French Band Saws, so as to preserve the round corner of the toothing.

Drag Saws.

| Teething. | Width at butt. | Width at point. | Usual length. | Price per foot. |
|-----------|-------------------|-----------------|------------------|--------------------|
| Champion | 10 in. | 8 in. | 6 ft. 6 in. | \$1 75 |
| Lance | 10 " | 8 11 | 6 " 6 " | 1 75 |
| | W 4500 | | 1 | |

Shingle Saws.

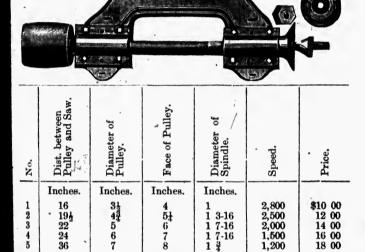
(Taper Ground to 14 Gauge at Teeth.)

Diameter... 32 in. 34 in. 36 in. 38 in. 40 in. 42 in. 44 in. 46 in. Price\$22.00 \$25.00 \$30.00 \$34.00 \$40,00 \$50.00 \$61.00 \$75.00

The above prices include drilling for the flange holes.

Send templet of flange.

Improved Saw Mandrels.



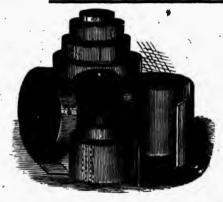
Roller Tube Expanders.



115 n. 145 in. 125 in. 125 in. 225 in. 215 n. 225 in. 235 in. 325 in. 325 in. 315 \$15 \$16 \$16 \$18 \$20 \$22.50 \$28

Expanders for Special Purposes made to order,

English Oak-Tanned Belting.



I carry a very large stock of GenUINE ENGLISH OAKTANNED BELTING, imported direct from England. Customers pronounce this belt "the best belt ever brought into Canada." The leather is very even in thickness and of very best quality, being tanned exclusively by the oak

tanning process, and finished in very best style. Joints are all glued and sewed joints (sewed with raw-hide lace) up to 4

in., and glued and sewed and riveted above 4 in.

The widths $4\frac{1}{2}$ ins. and under weigh 18 oz. to the square foot, and from 5 ins. and over run from 20 to 24 ozs. per square foot. A number of my customers are using this single belt instead of double belt with very satisfactory results. I have all widths in stock up to 16 ins. in single, and also carry 3, $3\frac{1}{2}$, 4, 6, 8, 10, 12, 15 and 18 ins. double.

This belt is guaranteed to run true and straight. I sell by the low Canadian list and guarantee the best and or superior to any of the best American belt now imported into Canada and sold on the American price list, which is

much higher.

92

I also carry in widths 4 ins. and under a lighter grade of this belt, weighing about 16 oz. to the square foot. Quality of leather, joints and finish are all similar to "Heavy," but the leather is a little lighter. This I call "No. 1."

| 110. 1. | | |
|---|--------------|--|
| Per foot. | Per foot, | Per foot. |
| 1 inch\$0 07 | 51 inch 0 50 | 16 inch 1 70 . |
| 11 " 0 091 | 6 " 0 55 | 17 · " 1 82 |
| 11 " 0 12 | 7 " 0 65 | 18 " 1 95 |
| 19 " 0 14 | 8 " 0 75 | 19 " 2 07 |
| 2 " 0 15 | 9 " 0 85 | 20 " 2 26 |
| | 10 " 0 95 | 22 " 2 45 |
| $\frac{21}{3}$ " 0 20 $\frac{21}{3}$ " 0 25 | 11 " 1 07 | 24 " 2 75 |
| | 12 " 1 20 | 27 " 3 13 |
| $\frac{31}{4}$ " 0 30 | 13 " 1 32 | 30 " 3 50 |
| | 14 " 1 44 | 39. " 4 25 |
| 41 " 0 40 | 15 " 1 56 | 49 " 5 00. |
| U U 10 | 100 (100 | ** *********************************** |

| DOUBLE BELT, DOUBLE PRIOR. | Per lb. | | | | | |
|--|---------|--|--|--|--|--|
| Best Lace Leather in half hides, ranging from 3 to 7 lbs | | | | | | |
| Cut Laces ally width | 1 00 | | | | | |
| Lace Cutters, each | 0 75 | | | | | |

Rubber Belting.

(Made from Best Cotton Duck.)

| | ď, | THREE-PI | .y. | | ı | ı | | FOUR- | PLY. | |
|-------------|------|----------|---|----------------|--|--|-------|-------|-------------------|---------------|
| Wid | | | | | ad-in- | Wie | | | | |
| 2 i 21/2 | nch, | per foot | | \$0 17 22 | ch is | $\frac{2}{2\frac{1}{2}}$ | inch, | per | foot \$0 2 | |
| 3 | " | " | | 26 30 34 | gth mal at a | 3 | " | " | 3 | 1 |
| 31 4 | " | 66 6 | | 34 | E o o o | $\begin{array}{c} 3\frac{1}{2} \\ 4 \end{array}$ | " | . " | 4 | 2 |
| 41 | " | 44 | | 39 43 52 | 4 5 3 | 4½ 5 | " | " | 4' | |
| 6 | " | " | | 52 60 | -3 - | 6 | " | ** | 6 | $\frac{2}{3}$ |
| 8 | " | " | | 70 80 | 1 3 0 5 0 | 8 | " | " | 8 | 4 |
| 10 | " | " | ••••• | 90 | where un o double at one w rices of 2 | 10 | " | " | 1 0 | 7 |
| 11 12 | " | " | • | 1 00 1 08 | ≱ 0 g.r. | 11 12 | " | " | | 8 |
| 13 14 | " | " | | 1 18 1 28 | rposes alent t order, r-ply I | 13 | " | " | 1 4 | $rac{2}{4}$ |
| 15 | " | | • • • • • | 1 38 1 50 | r purposes equivalent ts to order, Four-ply | 15 16 | :: | " | | 6 |
| 18 20 | " | " | | 1 70 1 90 | | 18 20 | " | . " | 2 0 | ž |
| 22 | " | " | | 2 12 | F T 8 2 2 | 22 | • • • | | 2 5 | 2 |
| 24 26 | " | | | 2 36 2 60 | ing Pair | 24 26 | | ` " | 3 0 | 8 |
| 28 | " | " | • • • • • | 2. 84 | D > D | 28 30 | . " | " | | 4 |

Intermediate widths at proportionate prices.

Two-Ply Machine Belting.

(For Agricultural Machines and other Light Work.)

| W | idth. | | | | | Width. | · · | |
|---|-------|-----|------|------|--------------|----------|----------|-------------|
| 1 | inch, | per | foot | | \$0 07 09 | 2½ inch, | per foot | 18 22 |
| i | " . | | " | | 11 | 31 " | | 26 |
| 7 | -" | | " | | 15 | 4 " | | 30 , |

Endless Belts made to order for which THREE EXTRA

Cotton Belting.

| | 2 PL | Υ. | 3 | PLY. | 4 PLY. | | | |
|----------------|-------|--------|---------|-----------|---------|--------|--|--|
| " | Vidth | Price. | Width | n. Price. | Width. | Price. | | |
| 1 | inch. | \$ 04 | 1½ inch | . \$0 07 | 4 inch. | \$0 21 | | |
| 11 | | 05 | 2 " | 09 | 41 " | 24 | | |
| 2 | " | 06 | 21 " | 11 | 5 " | 26 | | |
| $\frac{1}{2}$ | " | 07 | 8 " | 13 | 51 " | 28 | | |
| 3 | " | • 08 | 31 " | 15 | 6 " | 30 | | |
| $3\frac{1}{2}$ | " | 09 | 4 " | 16 | 7 " | 34 | | |
| 4 | " | 10 | 41 " | 18 | 8 ==== | 38 | | |
| 5 | , "" | 14 | 5 " | 20 | 9 | 44 | | |
| 6 | " | 18 | 51 " | . 22 | 10 " | 50 | | |
| | | | 6 " | 24 | 11 " | 56 | | |
| | | | 71 " | 28 | 12 " | 60 | | |
| | | | 8 " | 32 | 13 " | 67 | | |
| | | | 9 " | 36 | 14 " | 7 | | |
| | | | 10 " | 40 | 15 " | 8 | | |
| | | | 11 " | 45 | 16 " | 90 | | |
| | | | 12 " | 50 | 17 " | 98 | | |
| | | | 14 " | 62 | 18 " | 1 00 | | |
| | | | .16 " | 75 | 19 " | 1 08 | | |
| | | | * 18 " | 86 | 20 " | 1 1 | | |
| | | | 20 ' " | 96 | 22 - " | 1 3 | | |

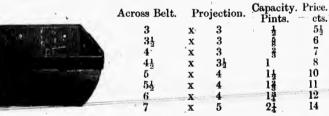
Belting in stock in 3 ply up to 9 inch wide.

Any other ply or width not in stock can be procured in tendays after receipt of order.

Belts of any width and ply not on this List can be made to order

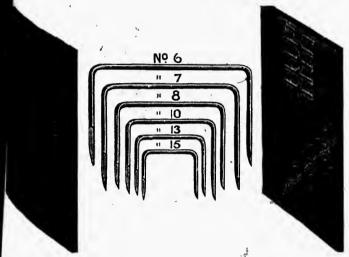
at proportionate prices on short notice.

Elevator Buckets.



Odd sizes, 20 per cent. additional.

"Buffalo" Belt Fastener.



FOR NEW BELTS.

FOR OLD BELTS.

| | | , | | | | | | | | | | | | | | | F | ri | ce. | |
|-----|-----|-------|------------|------|----------|---|------|--|--|--|--|--|--|--|--|--|------|-----|-----|--|
| No. | 15, | 1,000 | $_{ m in}$ | each | box, per | 1 | ,000 | | | | | | | | | | . \$ | \$1 | 50 | |
| " | 13, | "" | | " | 1 66 | | " | | | | | | | | | | | 2 | 00 | |
| | 10. | | | | " | | | | | | | | | | | | | | | |
| " | 8, | 500 | | " | " | 4 | " | | | | | | | | | | | 3 | 50 | |
| 16 | 7. | 250 | | " | " | | " | | | | | | | | | | | 4 | 00 | |
| 66 | 6. | 250 | | 66 | " | | 66 | | | | | | | | | | | 5 | 00 | |

Pliers for clinching, 35 cents per pair.

DIRECTIONS.

Place the ends of the belt to be fastened on a block of soft wood and drive the fasteners, beginning about one-fourth of an inch from the edge of the belt, and continue driving them at distances of one-half inch apart. Having done this, turn the belt over and place it on a piece of iron; if you have pincers use them to curve the points of the projecting fasteners, then use the hammer to drive the points back into the belt. (Always effect them toward the end of the belt.) Now drive fasteners between those just clinched so that they may be disched on the side that the others were driven. Clinch as before, and you will have the best, cheapest and most simple fastening in use.

Rubber Hose.

| Internal | នា | ANDAE | D. | | SUCTION. | | | |
|----------|-----------------|---------------|---------------|--------|---------------|---------------------------|---------|--------------------------|
| Diam. | 2 Ply Con'g. | 3 Ply Hyd. | 4 Ply Eng. | | 35 lbs. | 5 Ply 50 lbs. Steam | 75 lbs. | 4 Ply Hard Rubber. |
| ½ in. | \$0 20 | \$0 25 | \$0.30 | \$0 43 | \$0 51 | \$0 64 | \$0 76 | <i>i</i> |
| 3 | 25 | 30 | 37 | 51 | 67 | 83 | 1 00 | |
| 1 | 38 | 40 | 50 | 67 | 83 | 1 04 | 1 25 | \$0 75 |
| 11 | 42 | 50 | 62 | 85 | 1 04 | 1 30 | 1 56 | 93 |
| 11 | 50 | 60 | 75 | 1 02 | 1 25 | 1 56 | 1 87 | 1 13 |
| 2 | 66 | 80 | 1 00 | 1 34 | 1 66 | 2 07 | 2 49 | 1 50 |
| 21 | 83 | 1 00 | 1 25 | 1 66 | 2 08 | 2 60 | 3 12 | 1 88 |
| 3 | 99 | 1 20 | 1 50 | | | | | |

Linen Hose.

Cotton Hose.

| Inches. | Unlined, | Seamless. | Rubber Lined. |
|------------|----------|-----------|----------------|
| o 1 | \$0 | 20 | |
| 11 | | 24 | |
| 11/2 | | 30 | |
| 2 | | 36 | \$ 0 65 |
| 21/2 | | 45 | 75 |

For Hose Couplings, Branches, Fastners, Menders, &c., see page 51 For Steam Fire Engine Hose, write for prices and particulars.

The Shimer Matcher Heads.



TONGUE HEAD.

GROOVE HEAD.

THE SHIMER MATCHER HEADS represent a combination parts that give to the Bits the best possible position to form their work at once neatly and economically.

No part of the bit comes in contact with the lumber but cutting edge; hence their widespread reputation for light easy running.

ther Heads, per set, complete with Bits, 2\frac{1}{2} circle and under.

They are made to fit any Matcher in use.

tite for special large Catalogue giving full particulars Shimer's productions. Measurement cards furnished splication.

25,000 of the Shimer Cutter Heads are now in use.

Each head is stamped with a number agreeing with a d number in Mr. Shimer's Order Book. A careful

d is kept of every head made and all its parts.

When you order Cutters or anything pertaining to these ds, please refer to the record number that you will find ped upon each head, and I will understand your wants by. Be sure to give the number; it will save time in ling for it.

Machine Knives.

Planing Machine Knives.

Up to 4 in, wide and # in, thick,

| Each |
|--------------|
| .83 2 |
| 3 6 |
| . 3 8 |
| . 4 2 |
| . 4 5 |
| . 48 |
| |
| d duty |
| |
| 30 cts 25 |
| ther |
| |
| 35 ets 30 |
| 45 20 |
| 30 35 |
| ` |
| each |
| |
| |
| |
| each |
| |

Book of Moulding Patterns.

Cheese Box or Veneer Knives,

I have a large book of patterns of all styles of Mouldings, Railing etc., price 50c. each, by mail, prepaid. It will pay any woodworker have one of these. All the patterns are numbered, so that knives can ordered by number.

Length, 60 in. up to 7 in. wide, and \(\frac{3}{2} \) in. thick...

Over 60 in. to 70 in., \(\frac{3}{2} \) .00 per in. added.

"70 "80 "1.50 ""

"80 "100 "2.00 ""

Bed Pieces.

Eagle Anvils.



These anvils are fully warranted. The "Peter Wright" and all anvils, except the EAGLE, are made with a body and horn of fibrous wrought iron. This soft iron gradually settles, carrying the face with

and the anvil becomes hollowed on the face. Shear steel in the face is used, but it can never be made to take good imperlike cast steel. The EAGLE ANVIL body is made of gun stal—crystallized iron—which neither settles nor breaks, and not only the face, but the horn also, is of the best Tool. Last Steel, welded on so perfectly by the process of its original and only inventor, the late Mr. Mark Fisher, that it is waranted never to come off. The face, planed to a true surface, is made so hard that it always remains so. The steel horn is bugh and unhardened and will not break or bend.

STANDARD DIMENSIONS.

| Weight. | 1 | FACE. | | HORN. |
|---|---|---|--|--|
| weight. | Length. | Width. | Cutter Hole Square. | Length. |
| Pounds. | Inches. | Inches. | Teches. | Inches. |
| 100 110 120 130 140 155 160 170 180 200 215 | 12 123 124 131 14 14 14 143 15 164 17 | 31 33 34 4 41 41 41 41 41 41 | 34343434434 | Price 11c. 1 |
| 215 225 250 275 275 300 350 400 150 500 | 161 172 173 174 181 194 21 22 23 | 52 52 53 6 6 6 6 | 10.00.00.00.00.00.00.00.00.00.00.00.00.0 | 104 10 10 104 11 11 111 12 12 124 14 |

Dodge Wood Split Pulleys.



Give diameter, face and bore, and state whether straight on crowing face, when ordering.

| | _ | • | | _ | | , | | | | _ W : | ID' | ГН | OF | FA | CE | <u>—</u> I | NCI | IES_ | | | | | • | | =: - |
|------|----|-------------|-----|-----|-----|----|------|------|-----|--------------|-----|-----|----|-----|----|----------------|-----|-------|----|-----|----|-----|----|------|------|
| 9, | | : | 3 | | 4 | | | 5 | . ! | - `· (| 3 | 7 | 7 | - 8 | Í | - 5 | | 1 | 0 | 1: | 2 | 1. | 4 | 1 | 6 |
| 1 | 2 | \$ 2 | 80 | 0 | \$2 | 95 | . 83 | 3, 5 | 20 | \$ 3 | 55 | \$3 | 70 | \$3 | 85 | 84 | .08 | \$4 | 30 | \$5 | 10 | | | i | _ |
| Zi | 4 | 3 | ò | Ö | 3 | 25 | | 3 | 65 | .4 | iö | 4 | 40 | 4 | 70 | 5 | 02 | 5 | 35 | 6 | 00 | \$6 | 60 | | |
| INCE | 6 | 3 | 3 | Ö | 3 | 65 | | | 05 | • 4 | 60 | 5 | 05 | 5 | 50 | ··· <u>·</u> 5 | 90 | 6 | 30 | 7 | 00 | 7 | 70 | | |
| H. | 8 | 3 | 7 | ó | 4 | 05 | ٠٠, | | 55 | - 5 | io | 5 | 65 | 6 | 20 | 6 | 65 | 7 | iò | 8 | 00 | 9 | 00 | \$10 | 7 |
| FFE | 0 | | •• | • | 4 | 45 | 1 | 5 | 20 | 6 | 00 | 6 | 60 | 7 | 15 | 7 | 60 | ··· 8 | 00 | 9 | 50 | ii | 00 | 12 | 60 |
| AME | 22 | | ••• | • | 4 | 95 | | 5 | 90 | 6 | 85 | 7 | 45 | | 00 | ···ġ | 70 | 9 | 40 | ii | 20 | 13 | 00 | 14 | 20 |
| A | 24 | | ••• | | 5 | 40 | | 6 | 35 | 17 | 30 | 8 | 05 | . 8 | 80 | . 9 | 65 | iò | 45 | 12 | 70 | 15 | 10 | 17 | 50 |
| , 4 | 16 | | | 100 | 6 | 35 | 1 | 7, | 00 | 7 | 95 | 8 | 80 | 9 | 60 | 10 | 05 | ii | 40 | 14 | 20 | 17 | 50 | 20 | 80 |

For odd inches of diameter and face, divide the difference between the even inches, lower and higher.

Dodge Wood Split Pulleys. -Continued.

| | | | | WIDT | HOF | FACE- | -Inchi | 8 | | | |
|---------|--------|-------------|--------|--------|-----------|--------|--------|---------|----------------|----------------|----------------|
| ŝ | . 5 | -6' | 8 | . 10 | 12 | 14- | 16 | 18 | - 20 | 22 | 24 |
| 28 | 7 80 | 8 60 | 10 30 | 12 10 | 15 25 | 19 00 | 23 00 | \$26 90 | \$33 00 | \$37 00 | \$41 50 |
| 30 | . 8 60 | 9 40 | 11 50 | 13 25 | 16 50 | 21 00 | 25 40 | 30 00 | 34 50 | 38.25 | 42 25 |
| 32 | 9 40 | 10 30 | 12 90 | 15 00 | 17 90 | 22 75 | 27 75 | 32 25 | 36 25 | 40 25 | 44 25 |
| 34 | 10 50 | ii 50 | 14 50 | 17 00 | 20 00 | 24 50 | 30 00 | 34 50 | 38 75 | 42 75 | 46 75 |
| 36 | 11 90 | 13,00 | 16 00 | i9 i0 | 22 50 | 26 50 | 32 40 | 37 00 | 41 50 | 45 50 | 49 50 |
| 40 | 14 50 | 16 00 | 19 00 | 22 50 | 26 75 | 31 00 | 36 25 | 41 50 | 48 00 | 52 50 | 58 00 |
| 44 | 17 50 | 19 50 | 23 75 | 27 50 | 31 50 | 36 00 | 40 75 | 46.00 | 54 00 | 59 00 | 67 00 |
| 5 48 | 22 00 | 24 50 | 28 00 | 32 50 | 36 00 | 41 Q0 | 45 00 | 50 00 | 62 00 | 71 50 | 80 00 |
|] 50 | | 27 25 | 31 50 | 35 50 | 39 00 | 44 00 | 50 00 | 56 00 | 65 00 | 74 50 | 85 50 |
| 54 | | 33 50 | 87 50 | 41 00 | 45 00 | 49 50 | 55 50 | 64 50 | 73 50 | 83 00 | 92 50 |
| 56 | 7 | 37 00 | 40 50 | 44 50 | 48 50 | 53 50 | 60 00 | 69 to | 84 00 | 93 25 | 102 50 |
| 60 | | 42 50 | 47 00 | 51 50 | 56 00 | 62 00 | 68 50 | 78 00 | 91 00 | 101-00 | iii 00 |
| 66 | | 47 00 | 51 50 | 57 00 | 63.50 | 71 50 | 80 00 | 89 00 | 103 00 | 115 00 | 130 00 |
| 72 | | 51. 50 | 57 00 | 64 00 | 71 50 | 80.00 | 90 00 | 100 00 | 115 00 | 131 00 | 145 00 |
| 78 | | • • • • • • | 79 00 | 87 00 | 95 00 | 104 00 | 114 00 | 124 00 | 134 00 | 146 00 | 168 00 |
| 84 | | | | | | | | | | 170 00 | |
| 90 | | | 110 00 | 117 00 | 125 00 | 134 00 | 144,00 | 154 00 | 174 00 | 192 00 | 217 00 |
| 96 | | | 124 00 | 131 00 | 140 00 | 150 00 | 160 00 | 170 00 | 192 00 | 212 00 | 237 00 |

For odd inches of diameter and face, divide the difference between the even inches, lower and higher.

Steel Set Screws.



PRICE PER HUNDRED.

| Length under | | | | Diame | ter of | Screw. | | | |
|--|--|--|----------------|--|--|---|--|---|--|
| head to point. | 1 | 5-16 | 표 | 7-16 | 1 12 | 9-16 | 5 | 8 | 7 8 |
| 1 14 14 14 14 2 2 2 2 3 | \$4 80 5 15 5 50 5 85 6 20 6 60 | \$5 30 5 65 6 00 6 35 6 70 7 10 7 55 | | \$6 95 7 45 7 95 8 45 9 00 9 60 10 20 11 00 | 8 65 9 15 9 65 10 20 10 80 11 50 12 20 | 10 20 10 80 11 40 12 10 12 80 13 60 14 50 | 12 60 13 20 13 90 14 70 15 50 16 40 | \$16 80 16 80 18 00 19 30 20 80 22 40 24 10 | \$24 60 24 60 26 20 28 00 30 00 32 30 |
| 3 | | | | 11 80 | 13 00 13 90 | | | | 34 70 37 30 |
| Threads . | 20 | 18 | 16 | 14 | 12 | 12 | 11 | 10 | 9 |
| Add for each 1 in | \$0 45 | \$ 0 50 | \$ 0 70 | \$0 90 | \$1 00 | \$1 20 | \$1 25 | \$2 00 | \$2 80 |

Iron Set Screws (Case Hardened).

| Length under | | | | D | iame | ter o | f Scr | ew. | | |
|--|------|-------|-------|---------------|----------------------|---------------|--------------|----------------|----------------|-------|
| head to point. | ł | 5-16 | # | 7-16 | 4 | 9-16 | 8 | 8 4 | 7 8 | 1 |
| 2 | | \$ c. | | \$ c. 2 90 | \$ c. 3 40 | \$ c. 4 25 | | \$ c. | \$ c. | \$ c. |
| 1 1 | 2 30 | 2 50 | 2 1.0 | 3 30 | 3 80 | 4 50 | 5 00 | | 11 30 | 14.00 |
| 11 | 2 60 | 2 80 | 3 10 | 3 70 | 4 00 4 20 4 45 | 5 00 | | 8 00 | | |
| 2± 7 2± 2± 2± 2± 2± 2± 2± 2± 2± 2± 2± 2± 2± 2 | | 3 25 | 3 85 | 4 60 | | 6 05 | 6 80 | 9 30 10 00 | 13 80 14 80 | 19-80 |
| 324 | | , | | | 5 50 5 95 | | 7 25 7 75 | 10 80 11 70 | | |
| Threads | 20, | 18 | 16 | 14 | 12 | 12 | 11 | 10 | 9 | 8 |
| Add for each } in | 0 25 | 0 30 | 0 35 | 0 45 | 0 50 | 0 55 | 0 60 | 1 00 | 1 30 | 1 70 |

Square Head Cap Screws.



PRICE PER HUNDRED.

| Dia, of Hea | d | - <u>#</u> | 7-16 | 1 | 9-16 | 4 | 11 | - 3 | 4 | 11 | 11 |
|--------------------------------|--|------------------------------|--|--|--|----------------------|--|---|---|----------------------------------|---|
| Length of I | Tead | - | 11 32 | 13 | 15 32 | 9-16 | - | 11-16 | 13-16 | 15-16 | 110 |
| Dia. of Scre | w | 1 | 5-16 | Ħ | 7-16 | 1/2 | 9–16 | | 3 | 78 | 1 |
| Length under Head to Point. | 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 | 2 60 2 75 2 90 3 05 | 2 95 3 10 3 30 3 50 3 70 4 00 | 3 40 3 65 3 85 4 10 4 35 4 65 5 00 | 4 00 4 20 4 45 4 70 4 95 5 25 5 60 6 00 | 6 30 6 75 7 25 | 5 75 6 05 6 35 6 65 7 05 7 55 8 15 8 85 | 7 70 7 70 8 25 8 80 9 40 10 10 10 90 11 80 | 10 50 10 50 11 10 11 80 12 60 13 50 14 60 | 14 00 14 80 15 70 16 70 | 18 00 19 00 20 20 21 50 23 10 |
| Threads to | inch | 20 | 18 | 16 | 14 | 12 | 12 | 11 | 10 | 9 | 8 |
| Add for eac | h ‡ in | 25 | 35 | 45 | 55 | 65 | 90 | 1 20 | 1 50 | 1 80 | 2 30 |

Hexagon Head Cap Screws.

| Diameter of Head | . 7-16 | 1 | 9-16 | 8 | ź | 13-16 | 7 8 | 1 | 11 |
|-----------------------------|------------------------------|--------------------------------------|------------------------------|--|----------------------|---|--|--|---|
| Length of Head | . 9-32 | $\frac{1}{3}\frac{1}{2}$ | 13 | 35 | 9-16 | 8 | 11-16 | 13-16 | 15-16 |
| Diameter of Screw. | . 1 | 5-16 | # | 7-16 | 1/2 | 9-16 | 8 | 2 | 7 |
| Length under Head to Point. | 3 25 3 50 3 75 4 00 | 3 50 3 75 4 00 4 25 4 60 | 4 00 4 25 4 50 4 75 | 4 70 5 00 5 30 5 60 5 95 6 35 6 80 | 6 30 6 60 7 00 | 7 50 8 00 8 50 9 10 9 70 10 40 | 9 50 10 00 10 60 11 20 11 90 12 70 18 60 | 12 20 12 80 13 40 14 10 14 90 15 90 | 16 60 17 20 17 90 18 80 20 00 |
| Threads to inch | . 20 | 18 | 16 | 14 | 12 | 12 | 11 | 10. | 9 |
| Add for each 1 inch | . 30 | 40 | 50 | 60 | 80 | \$1 00 | \$1 30 | \$1 60 | \$2 00 |



PRICE OF MATERIALS FOR AIR-CHAMBER COVERINGS, COMPLETE, INCLUDING & CANVAS.

| | 11 | | FOOT | ON K | EGUI | ARS | 1263 | OF PI | J. | (| |
|----------------------------------|-------|------------|--------|------------|-------|------------|-------|------------|------------|-------|-------|
| Sizes of Pipe. | å in. | ii. | 1, in. | 1½ in. | 2 in. | 24 in. | 3 in. | 25 in. | 4 in. £ | 5 in, | 6 in. |
| Single Air-Cham- ber Covering | cts. | cts. 20 | cts. | cts. 27 | cts. | cts. 36 | cts. | ots. 45 | cts. 50 | cts. | cts. |
| Oouble Air-Chamber Covering | 27 | 33 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 87 | 1 02 |

Rubber Steam Packing.

| Cloth insertion—cloth on either or both sides—1-16 or thinner, 1, 2 or 3 ply. | per lb. | 35c· |
|---|---------|------|
| Square piston and valve rod, 1, 2 or 3 ply | " | 80c. |
| Russia Hemp Packing | per lb. | 20c. |
| Italian " " | | 30c. |
| Soapstone " " | 44 | 30c. |
| Kidders' Plumbago , in. and thicker | | 60c. |

Machine Bolts.

PRICE PER HUNDRED.

| length. | 4 | 18 | 38 | 176 | 1/2 | _ | 16 8 | £ § | 4 | , | 78 | | 1 | - |
|---------|--------|--------|--------|-------------|-----|-----------|------|-----|--------------|----|------|----|------|----|
| 14 inch | \$2 80 | \$3 20 | \$3 60 | \$4 60 | \$5 | 00 | \$7 | 20 | \$ 10 | 50 | \$14 | 90 | \$22 | 00 |
| 2 " | 2 90 | | | | 5 | 30 | 7 | 70 | 11 | 10 | 15 | 80 | 23 | 10 |
| 21 " | 3 00 | 3 50 | 4 00 | | 5 | 60 | 8 | 20 | 11 | 70 | 16 | 60 | 24 | 20 |
| 3 " | 3 10 | 3 65 | 4 20 | 5 50 | 5 | 90 | 8 | 70 | 12 | 30 | 17 | 50 | 25 | 30 |
| 31 " | 3 20 | 3 80 | 4 40 | 5 80 | 6 | 20 | 9 | 20 | 12 | 90 | 18 | 30 | 26 | 40 |
| 4 " | 3 30 | 3 95 | 4 60 | 6 10 | 6 | 50 | 9 | 70 | 13 | 50 | 19 | 20 | 27 | 50 |
| 41 " | 3 40 | 4 10 | 4 80 | 6 40 | 6 | 80 | 10 | 20 | 14 | 10 | 20 | 00 | 28 | 60 |
| 5 " | 3 50 | 4 2 | 5 00 | 6 70 | 7 | 10 | 10 | 70 | 14 | 70 | 20 | 90 | 29 | 70 |
| 51 " | 3 60 | | | | | 40 | 11 | 20 | 15 | 30 | 21 | 70 | 30 | 80 |
| 6 " | 3 70 | | | 7 30 | 7 | 70 | 11 | 70 | 15 | 90 | 22 | 60 | 31 | 90 |
| 61 " | 3 80 | | | | | 00 | 12 | 20 | 16 | 50 | 23 | 40 | | 00 |
| 7 " | 3 90 | | | 7 90 | | 30 | 12 | 70 | 17 | 10 | 24 | 30 | 34 | 10 |
| 71 " | 4 00 | 1 | | 8 20 | 8 | 60 | 13 | 20 | 17 | 70 | 25 | 10 | 35 | 20 |
| 8 " | 4 10 | 5 15 | 1 | | 8 | 90 | 13 | 70 | 18 | 30 | 26 | 00 | | 30 |
| 9 " | | | 6 60 | | | 50 | 14 | 75 | 19 | 50 | 27 | 70 | | 50 |
| 0 . " | | | 7 00 | | | 10 | 15 | 75 | 20 | 70 | 29 | 40 | 40 | 70 |
| 11 " | | | 7 40 | 10 30 | | 70 | 16 | 75 | 21 | 90 | 31 | 10 | | 90 |
| 2 " | | | 7 80 | 10 90 | | 30 | 17 | 75 | 23 | 10 | 32 | 80 | | 10 |
| 3 " | | | | | 11 | 90 | 18 | 75 | 24 | 30 | 34 | 50 | 47 | 30 |
| 4 " | | | | | 12 | 50 | 19 | 75 | 25 | 50 | 36 | 20 | 49 | 50 |
| 15 " | | | | | 13 | 10 | 20 | 75 | 26 | 70 | 37 | 90 | 51 | 70 |
| 16 " | | | | | | 70 | 21 | 75 | 27 | 90 | 39 | 60 | 53 | 90 |
| | | | | | | 30 | 22 | 75 | 29 | 10 | 41 | 30 | 56 | 10 |
| 8 44 | | | | | | 90 | 23 | 75 | 30 | 30 | 43 | 00 | 58 | 30 |
| .0 | | | | • • • • • • | | 50 | 24 | 75 | 31 | 50 | 44 | 70 | 60 | 50 |
| 90 " | | | | | 16 | 10 | 25 | 75 | 32 | 70 | 46 | 40 | 62 | 70 |

Bolts with Hexagon Nuts, 10 per cent. extra.

If both Hexagon Heads and Hexagon Nuts, 20 per cent. extra.



Common Carriage Balts.

PRICE PER HUNDRED.

| Langth | *** | is | 3 B | Ž 6 | 1 | 18 K 5 | ** |
|------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|
| 1 to 1 in. | \$1.35 1.40 | \$1 40 1 48 | 2 30 2 30 | \$3 10 3 10 | \$3 40 3 40 | \$7.80 7.80 | |
| 2 | 1 30 | 1 75 | 2.00 | 3 10 | 3 46 | 7 30 7 30 | ******* |
| 2 | 1 35 | 1 10 | 2 30 | 3 35 | 4 12 | 7 30 | |
| 3 4 | 1 60 | 1 編 2 節 | 2 70 | 3 46 | 4 44 | 7 50 7 50 | \$13 50 |
| 31 " | 1 70 | 2 13 | 2 40 | 3 73 | 4 60 | 7 75 | 13 85 |
| 3 | 1 75 | 2 20 2 28 | 2 90 | 3 85 | 4 76 | 6 60 | 14 20 |
| 24. 44 | 1 45 | 2 35 | 3 10 | 4 10 | 5 08 | 8 30 | 14 90 |
| 4 1 | 1 95 | 2 43 | 3 20 | 4 23 | 5 24 | 9 80 | 15 25 |
| 46 | 2 90 | 2 56 | 3 40 | 4 48 | 5 36 | 9 3 | 15 45 |
| 51 4 | 2 10 | 2 65 | 3 50 | 4 60 | 5 72 | 9 30 | 16 65 |
| 51 " | 2 15 | 2 80 | 3 70 | 4 85 | 6 94 | 10 00 | IT 00 |
| 6 " | 2 20 25 | 2 新 | 3 10 | 5 10 | 6 20 | 10 25 | 17 35 |
| 10 44 | 2 30 | 3 63 | 4 90 | 5 #3 | 6 32 | 10 75 | 16 05 |
| 7 | 2 45 | 3 10 | 4 10 | 5 60 | 6 68 7 60 | 11 50 | 16 46 |
| 73 " | 2 35 | 3 40 | 4 50 | \$ 85 | 7.32 | 12 80 | 19 60 |
| 8 11 | 2 65 | 3 55 | 4 70 | 6 35 | 7 64 | 12 50 13 00 | 20 50 21 20 |
| \$ 44 | 2 85 | 3 85 | 5 10 | 6 60 | 8 28 | 13 50 | 21 90 |
| 10 4 | 2 95 | 4 10 | 5 30 | 7 10 | 8 40 | 14 90 | 22 60 23 30 |
| 105 4 | 3 15 | 4 30 | 5 70 | 7 35 | 9 24 | 15 00 | 24 90 |
| 111 4 | 3 25 | 4 45 | 5 90 | 7 60 | 9 56 | 15 50 16 90 | 24 70 25 40 |
| 12 4 | 3 45 | 4 75 | 6/20 | 8 10 | 10 20 | 16 50 | 26 10 |
| 121 4 | 3 55 | 4 90 5 95 | 6 70 | 8.35 | 10 52 | 17 40 17 50 | 26 80 27 50 |
| 131 4 | 3 75 | 5 20 | 6 19 | 8 65 | 11 16 | 18 90 | 28 20 |
| 14 4 | 3 85 | 5 25/ | 7 10 | 9 10 | 11 48 | 16 50 | 28 90 |
| 141 ** | 3 % 4 95 | 5 50 | 7 20 . | 9.25 | 11 80 | 19 90 19 50 | 29 60 30 30 |
| 151 ~ | 4 15 | 5 40 | 7 70 | 9 85 | 12 44 | 20 00 | 31 00 31 79 |

Square and Hexagon Nuts.

(Hot Pressed. U.S. Standard sizes.)

| Diameter. | Thick. | Hole. | Bolt. | ° Pr | ice. |
|---|---------------------------------|--|---|-----------|-----------|
| Diameter. | Inica. | Tiole. | DOIO. | Square. | Hexagon. |
| » <u>1</u> | , | 13 | 1 | 13 cents. | 20 cents. |
| 12 | . 3 | 1 | | 12 " | 18 " |
| 11 | 8 | 19 | 3 | 10.5 " | 14 " |
| 24 | 7, | 11 | j, | 10 " | 13 |
| Į. | 1 | 34 | 1 | 9 " | 11.2 " |
| 21 | 10 | 89 | 5 | 9 " | 11.2 " |
| 1,4 | Q | 33 | 16 38 7 76 22 96 88 | 8.7 "' | 10.2 " |
| 11 | 445 6 113 7 8 4 2 9 5 0 114 7 8 | . 4 | ă | 8.4 " | 9.9 " |
| 17 | Ž | \$Z. | Ī | 8.4 " | 9.9 " |
| 14 | 1 | 27 | 1 | 82 " | 9.7 " |
| 113 | 1 | 14 | 11 | 8.2 " | 9.7 " |
| 2 | 11 | 178 | 11 | 8.4 " | 9.9 " |
| 2,3 | 18 | 132 | 13 | 8.4 " | 9.9 " |
| 28 | 11/2 | $1\frac{1}{3}\frac{6}{2}$ $1\frac{6}{3}$ | 11 | 8.8 " | 10.3 " |
| 2 9 | 18 | 13 | 18 | 8.8 " | 10.3 " |
| 23 | 12 | 11/2 | 18 | 9.3 " | 10.8 " |
| 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 15 13 17 | 18 | 136 136 136 136 137 2 2 | 9.3 " | 10.8 " |
| 3 1 5 3 1 5 | 2 21 21 21 | 123 | 2 | 9.5 " | 11 " |
| 315 | 21 | 118 | 21 | 10 " | 11.5 " |
| 31 | 21 | 115 | 21 | 10 " | 11.5 " |

Flat Head Stove Bolts.

| | | | | | L | dng | ζ t h | l. | | | \ | \ | | | ŧ | - | 18 | | # # |
|---|--------|-----|-------|-----|-------|-----|--------------|-------|-------|----------|-------|-------|-----|-----|----|-----|----|-----|-----|
| 3 | inch . | •• | - | | | | | | | <u> </u> | | | | \$0 | 65 | \$1 | 05 | \$2 | 20 |
| l | ** | | | | | | | | | | | ٠., | | | 70 | 1 | 10 | 2 | 20 |
| 1 | " | | | | | | | | | | | | ١ | | 75 | 1 | 15 | 2 | 20 |
| ī | 66 | | | | | | | | | | | | / | | 80 | ! 1 | 20 | 2 | 20 |
| å | . 66 | ••• | ••• | | • • • | • • | ••• | ••• | • • • | • • • | • | • • • | ./. | 1 | 85 | li | 23 | 2 | 20 |
| * | 46 | • | • • • | • • | • • • | ••• | | • • • | • • | ••• | ••• | •••• | | | 90 | li | 30 | 1 0 | 20 |
| 1 | " | | | | | | | • •.• | ••• | • • | • • • | ••• | ••• | | 95 | li | 35 | 2 | 30 |
| 1 | - 00 | | | | 4 | - | - | | | | | | | 1 | 00 | 1 | 40 | 2 | 40 |
| 4 | 46 | | | | | | | | • | | | | | 1 | 05 | 1 | 45 | 2 | 50 |
| • | 66 | ٠. | | • | , . | ••• | ••• | ••• | • • • | • • | ٠. | • • • | ••• | i | 10 | li | 50 | 2 | 60 |

Sundry Goods.

Boiler Tubes. Size 1½, 1½, 2, 2¼, 2½, 3, 3½, 4. Price: Lowest market. Send for quotations.

Boiler Plates. Steel and Iron Send for circular.

Sheet Iron, at lowest market prices. Give size and gauge in ordering.

Guy Wire. Galvanized. 7 Strands.

Size of each strand.... No. 19 No. 18 No. 17 No. 16
Price per 100 feet..... 60c. 70c. 80c. \$1.00

Wire Rope. Homogeneous Steel—hemp centre—6 strands of 7 wires each.

Diameter $\frac{9}{12}$ $\frac{7}{16}$ $\frac{8}{8}$ $\frac{7}{76}$ $\frac{1}{2}$ $\frac{9}{16}$ $\frac{8}{4}$ Per foot 4c. 5c. 6c. 7c. 8c. 9c. 12c. 16c.

Chain, from $\frac{1}{8}$ to 1 inch, in lengths to suit, at lowest market prices.

Babbitt. No. 0 1 A

Per pound 10c. 12c. 35c.

Grindstones. Any size and grade at lowest market prices.

Shafting, turned to standard, in sizes 1 in. to 6 in. diameter. Usual sizes in stock ready for shipment, at lowest market price.

Hangers. Adjustable drop, post, beam or standard pattern sizes 1½ to 3 in. in stock, at lowest market prices. Prompt delivery.

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No. 1, White, per lb. 10c.

No. 1, Colored, per lb. 8c.

1, 2, 1, 4, 91c.

1, 2, 1, 4, 7c.

Pick Handles. Miners extra, per doz. \$2,50, No. 1 \$2.00, No. 2, \$1.50. Fork, axe and hammer handles to order.

Standard Punches. Richards' Patent Standard Size Punches,
Dies and Couplings, from to 1t in. Send for circulars.

Speed Indicators, each \$1.50.

Pulsometers. Send for catalogue.

Centrifugal Pumps. Send for catalogue.

Portable Platform Scales.

WITHOUT WHEELS.

| | | ~ | | ** | TO | - | | | ń. | | | |
|------|-------------------|----------|--------|-------|----------|-----|------|----------|---------|--------------|------|---|
| No. | 112, | Capacity | | | | 22 | x 19 | in | Price | | | |
| ** | 11 | " | 600 | " | " | 25 | x 16 | in | - " | 23 | 50 | |
| 46.6 | 101 | 44 | 1,000 | " | 4.6 | 26 | x 17 | in | 46 | . 26 | 00 | |
| ` 66 | 102 | 44 | 1,200 | . 44 | 66 | | | in | | | 00 | |
| 44 | 9 | 46 | 1,500 | 66 | 66 | 00 | - 01 | in | 66 | | 00 | |
| | | 66 | | 66 | 46 | | | | | | | |
| | 8 | | 2,000 | | | | | in | | | 00 | |
| " | 7 | | 2,500 | " | " | 30 | x 23 | in | " | 47 | 00 | _ |
| | | | | V | VITH WHE | LS. | | | | | | |
| No. | 11 1 , | Capacity | 400 | lbs., | Platform | | | in | | \$21 | 50 | |
| 66 | 11 | *** | 600 | " | " | 25 | x 16 | in | . " | 25 | 50 | |
| " | 101 | . 66 | 1,000 | 46 | . 66 | 26 | x 17 | in | " | 29 | 00 | |
| 66 | 102 | 44 | 1,200 | 44 | 66 | 28 | v 20 | in | • " | | 00 5 | 1 |
| 64 | _ | 44 | 1,500 | 44 | " | 28 | v 21 | in | | 37 | | |
| " | 8 | 46 | 2,000 | 44 | 46 | 30 | - 53 | in | ٠ " | | 00 | |
| " | 7 | | | 44 | 66 | | | | | | | |
| ••• | 7 | , | 2,500 | | • | 30 | X 25 | in | • " | 00 | 00 | |
| | | w | ITH HE | AVY | WHEELS A | ND | DRO | P LEVER. | | | |) |
| No. | 10å. | Capacity | 1,200 | lbs., | Platform | 26 | x 17 | in | . Price | \$ 33 | 00 | |
| 66 | 10 | *** | 1,500 | | 66 | 28 | x 20 |) in | " | | 00 | |
| ٠ دد | 9 | 66 . | 2,000 | | 66 | 28 | ¥ 21 | in | " | | 00 | |
| 66 | 8 | 44 . | 2,500 | | 66 | | | in | | | 00 | |
| 44 | 2 | " | | | 44 | | | | | | | |
| •• | 7 | •• | 3,000 | ••• | •• | 30 | X Z | 3 in | . " | 61 | 00 | |
| | | | | | | | | | | | | |

Warehouse Scales.

| | | | | | | | | | | | | WITHOU | JT. | |
|-----|----|----------|-------|-----|----------|----|---|--------|-------|-------|----|--------|-----|---|
| No. | 1. | Cauacity | 5,000 | lbs | Platform | 48 | x | 48 in | Price | \$110 | 00 | \$100 | 00 | , |
| 66 | 4 | *** | 3,500 | 6 | 66 | 42 | x | 44 in. | . " | 85 | 00 | 80 | 00 | ٠ |
| 44 | 5 | 66 | 3,000 | 46 | 64 | 31 | x | 40 in. | . " | 68 | 00 | 65 | 00 | , |
| 66 | | 44 | 2,500 | 66 | . 66 | 25 | x | 34 in. | " | 63 | 00 | 60 | 00 | |
| 44 | 9 | | 2,000 | 46 | | | | 31 in. | | | 00 | | | |

Counter Scale.

(Capacity 1-2 oz. to 36 lbs.)

| Price, | with | Tin Scoop \$ | 8 0 | 0 |
|--------|------|--------------|-----|---|
| 44 | " | Brass Scoop | 90 | 0 |

Grocers' Scale—Single Beam.

(Capacity 1-2 oz. to 62 lbs.)

| | | - | 171 | - | - | ander von | | | | - | nunuman. | - | - | and the same | | - | | | | |
|---------|------|-----|----------|-------|-----|-----------|-----------|-------|-------|-------|----------|---|---|--------------|------|----|-------|-----|----|---|
| I rice. | with | Tin | Scoop | | | | | | | | | | | | | | | 9 (| N | |
| 66 | 66 | Dan | an Ganan | | | | | | | | | | | 9 , | 1. 3 | 15 | 46. 9 | 0 0 | n. | ž |
| | | DIA | doone se | | • • | | • • • | • • • | • • • | • • • | | | | | • • | | 2110 | | | å |

Pecora Paint Co,'s Steel Colors,

FOR ENGINES, TOOLS AND GENERAL MACHINERY.

This paint gives a smooth and handsome finish; dries quick and hard; is uniform in shade, and very durable. In four shades—light, standard, medium, and dark.

| Barrels (800 lbs.) | at 10c. | per lb. |
|-----------------------------------|---------|----------|
| Half Barrels (400 lbs.) | " 10½c. | " |
| Quarter Barrels (150 to 250 lbs.) | " 11c. | " |
| Cans (6 in a case), 25 lbs. each | " 12c. | " |
| "Paint Thinner," for Flat Color | 90c. | per gal. |
| Iron Filler | \$2.80 | " |

The Filler makes rough castings smooth, fills all holes and irregularities even, thus preparing the castings for a fine finish with the "Steel Color."

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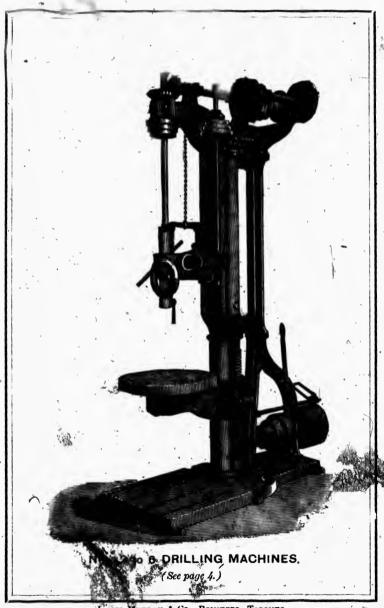
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